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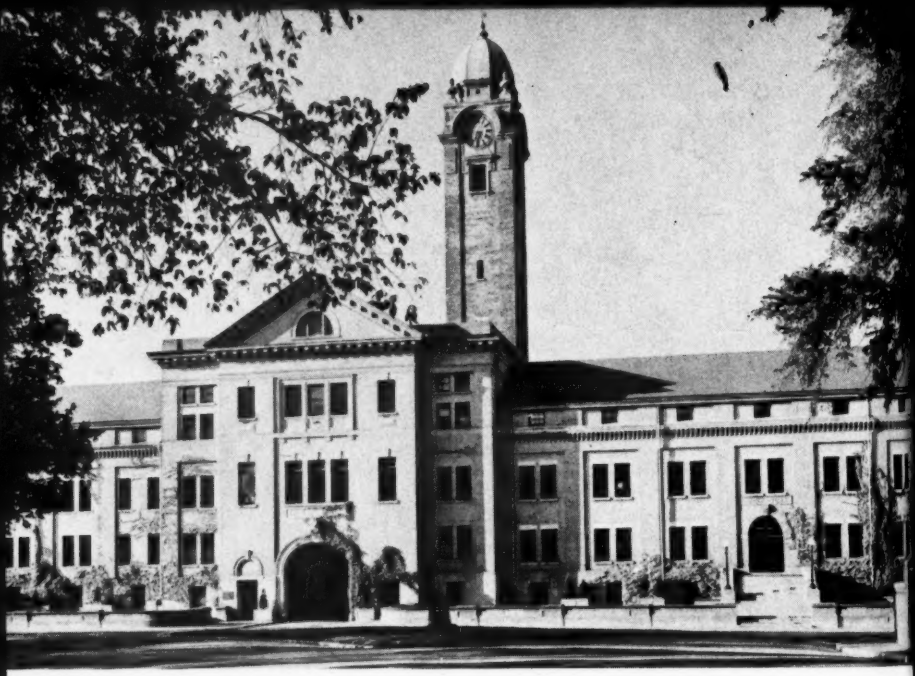

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# MILITARY REVIEW

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# THE ECONOMIC THREAT OF SOVIET IMPERIALISM

Major General Arthur G. Trudeau, *United States Army*
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*This article is an unclassified version of presentations made by General Trudeau to the Army Policy Council, the Army War College, the Command and General Staff College, and other military groups. The views expressed are not necessarily those of the Department of the Army.—The Editor.*

WE TEACH in our Strategic Intelligence School that economic potential is the best single measure of a nation's strategic capabilities. It is sound doctrine, based on the lessons gained from history. Furthermore, the attainment of Soviet objectives is heavily dependent on economic factors. For these reasons the economic basis of Soviet power should be examined.

We can accept the premise that Moscow is still hostile to us, and will continue its efforts to expand the area of Communist influence. At the same time we should, as the President and the Secretary of State have said, explore any possibility that leads in the direction of true peace.

With these thoughts in mind, let us examine coldly, analytically, and objectively, the economic means by which the Soviets can pursue their long-range objectives. The economic data which I will use are available to any student of Soviet economics. I have assembled this public information and will present it to you in a form which will enable you to reach your own conclusions.

The capacity of any nation to carry out its national objectives is based on the strength and flexibility of its economy, a proposition to which the USSR is no exception. The basic nature of economics is enhanced as applied to the USSR, for it is the basis of the Communist ideology and movement. I do not believe I have to labor this point with you, for I am sure that from what you have read of the Soviet Union you understand that communism is a doctrine of economics even more than of politics. Let us look to a significant quote to illustrate this. In Lenin's "Report to the 8th Congress of the Soviets" in 1919, he proclaims:

*Communism is the Soviet power plus electrification of the whole country. Otherwise the country will remain a small peasant country, and that we must clearly recognize. We are weaker than capitalism, not only in the world scene but within the country. We shall see to it that the economic basis is transformed from a small-peasant basis into a large-scale industrial basis. Only when the country*

***We must scrutinize not only the ideological challenge but also the economic challenge before us, backed as it is by powerful military forces and subversive political activity conducted on a scale unknown before***

*has been electrified, when industry, agriculture, and transport have been placed on a technical basis of large-scale industry, only then shall we be finally victorious.*

I give you the foregoing quotation for its value as an illustration of the key role played by economic development in the Communist philosophy.

### USSR Economic Strength

First, let us look at the over-all economic situation of the USSR. The salient fact which we must face, ruefully if you will, is that the determination expressed by Lenin, as quoted earlier, to see to it that the economic basis of the Soviet Union is transformed from a small-peasant basis into a large-scale industrial basis, has been realized.

The economic strength, expressed as gross national product, of the Soviet bloc is now only one-third of that of the NATO countries. This could be very reassuring, except for two considerations; first, the necessity for taking differences of systems and background into account, particularly the use to which the industrial product is put; and second, the fact that the Communist bloc economies are expanding at a much faster rate than economies of the free world (although of course from a smaller base).

With regard to the first of the foregoing considerations, let us bear in mind that the Soviet economy supports a way of life which is entirely different from ours. In transforming her economy from a small-peasant to a large-scale industrial basis, the Soviet Union had concentrated on the expansion of capital goods and heavy industry, "the production of the means of production," as she likes to call it, and the production of those items which will support her armed forces. The result is that while the Soviet people have a standard of living which is far below ours, they also maintain the largest standing army in the world together with powerful air and naval forces, which they do by devoting, over the years, a far larger percentage of their industrial output to the production of military equipment than we have.

With this introduction to the subject of their economy, we will examine some of the most significant aspects thereof in more detail, including their economic capacity to support their military forces in war.

### Industrial Strength

We will first examine the strength of their industries. The best way to start our examination of the industrial situation is to look at five primary items which we regard as an indication of their economic strategic potential. Figure 1 portrays coal, steel, crude petroleum, electric power, and primary aluminum as being the vital items. This shows the Soviet position in these items, and how it compares to the United States in each case.

Steel and oil should be discussed in some detail. (See Figure 2.) Steel is a basic item for industrial output as well as for most munitions production. In 1954

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Soviet production was 41 million tons, with 13 million more tons coming from the European satellites. Let us examine this figure in view of Soviet World War II experience.

In 1940, before the Soviets went into the war, they were producing 18 million tons of steel. A large part of the steel capacity was lost as a result of the German invasion; only 9 million tons annually were produced in 1943 and 1944, of which about 6 million tons were devoted to direct military production, including production of 30,000 tanks and 80,000 pieces of artillery per year. Now, of course, we were pouring in tremendous quantities in the way of trucks and weapons for them, but nevertheless it shows you the reasonably small amount they need for military production.

The experience of Germany and Japan in World War II reveals that steel capacity, although not high, was not a limiting factor. Germany fought the war with an average annual production of 20 million tons and Japan with only 5 million tons.

If the Soviet bloc has a real vulnerability in supplying its armed forces in the event of war, it is probably petroleum. The Soviets are now producing about 73 million tons of petroleum per year. (See Figure 3.) At the start of World War II they were producing 31 million tons annually, or less than half the present amount. Production fell to 17 million tons during the height of World War II but was almost enough for wartime needs. Increased mechanization of the army and more aircraft have stepped up war requirements, but oil production has more than kept pace.

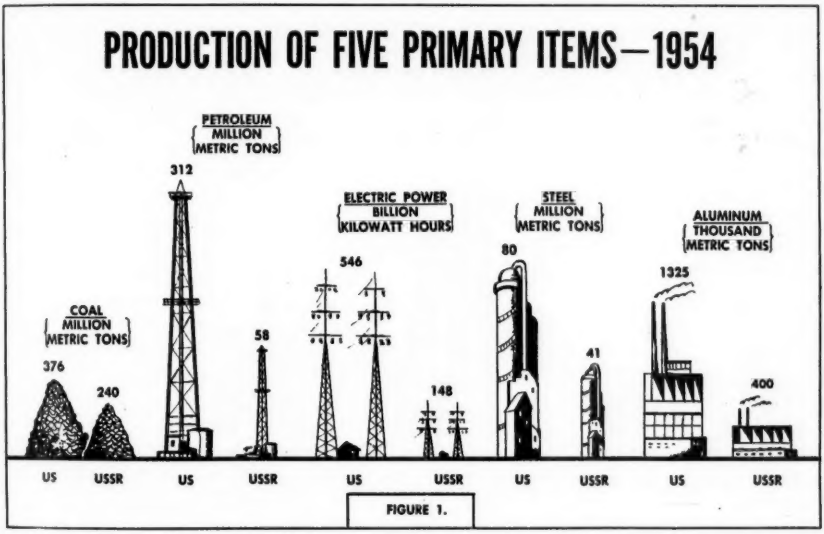

FIGURE 1.

These five basic items previously listed were selected because they are indicative of industrial strength. The economy of the USSR consists of more items than these five and is filled out with the processing and final manufacturing facilities to create a complete industrial structure. This strong industrial complex, and the fact that Soviet factories are designed for ready conversion to military production, places the Soviet Union in a favor-

able position to support military aggression.

There is a highly significant and revealing aspect of the Soviet economy indicated by the figures on labor forces shown in Figure 4. Note that the United States industrial labor force is almost 50 percent larger than the Soviet, even though the United States population is less. The reason is that we have only 7 million persons employed in agriculture, whereas the Russians use 48 million. It means that 1 Russian peasant supports 4 persons with his produce, whereas 1 American farmer supports 22 of us with plenty to ship to other peoples of the world. The steps which the Russians are taking to correct this situation will be discussed later.

The foregoing discussion of the five basic items of economic military potential and the industrial labor force looks rather favorable for us in many ways, except that we must consider to what use the Soviets put these basic industrial resources. The two top priorities for their industrial output are support and equipment for the military establishment and investment in the means of production, which result in a rapidly developing industrial structure.

### Soviet Armament Production

The Soviet Union gives high priority in the allocation of industrial output to armaments production, as well as high priority in the allocation of total economic resources to her military forces. Since World War II about one-sixth of the gross national product has been allocated to military uses and about 7 percent of total output consisted of military hardware. Before the Korean conflict our military expenditures accounted for 4 percent of gross national product and military goods for less than 1 percent. United States military expenditures have increased substantially since 1951 and the Soviet Union has lost some of her advantages in this respect.

The Soviets have devoted, over the years, a larger proportion of their pro-

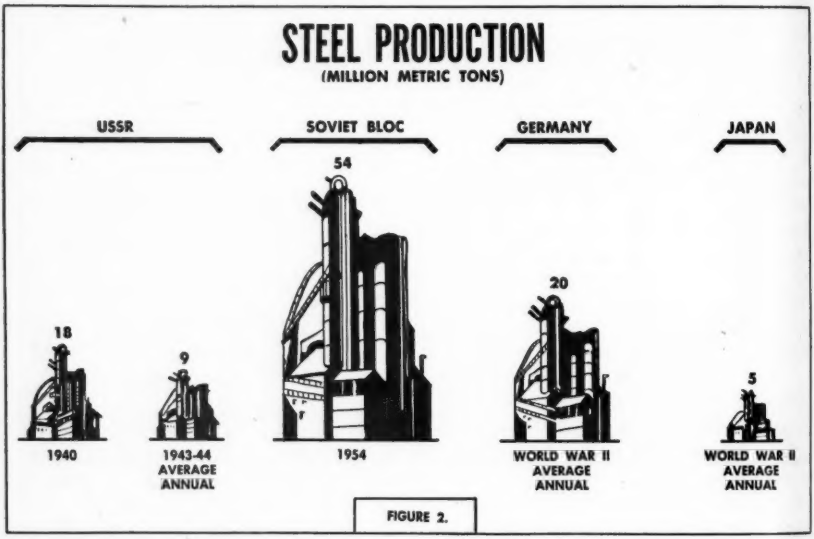


FIGURE 2.

ductive capacity to support their military establishment than we do. While we are busy producing automobiles and the fuel to propel them, the Soviets have been building up a stockpile of modern weapons which is adequate to equip their large military establishment and still have large reserve stocks.

When we are aroused as we were by Korea, we can produce as much military equipment under conditions short of all-out war as the Russians. Both countries have economic mobilization potential far in excess of present capacities, the United States to a much greater degree in a long pull. Due to the increasing capability of the Soviets to strike this country by air and the fact that a substantial part of our Military Establishment is already deployed on the same land mass with the USSR, both in Europe and the Far East, our military posture requires a much greater readiness for war at a given moment than has heretofore been required. Our traditional role of an island power has been changed which means that we have taken on those characteristics of continental powers which demand strength in being, on the ground as well as on the sea and in the air.

Contrary to a belief entertained by some that Soviet weapons are inferior in quality, the weapons with which the Soviet Army is now equipped are rugged, dependable, and effective. By our standards some aspects of their weapons, such as rough outside finishes and lack of crew comfort, appear crude, but these features are compensated for by emphasis on more important characteristics, such as firepower, ruggedness, armor protection, and mobility.

Take for example the heavy tank of the Soviet Army, the *JS-3*, one of the most powerful tanks in general use today. It weighs only 51 tons, not a great deal more than our *M48*, although it mounts a formidable 122-mm gun. It has an extremely low silhouette, only 8 feet, compared with tanks of the Western Powers, and an efficient armor layout. It may be said that the *JS-3* represents an outstanding accomplishment by Soviet designers to produce a tank mounting a big gun and possessing excellent armor protection.

Recently the Soviets have made substantial progress in improving their weapons. A new series of infantry and artillery weapons has appeared. Their submachine-gun is one of the finest infantry weapons in the world. A new medium tank is already reported to exist.

### Satellites' Economic Strength

Before going any further I will describe the economic relationship of the

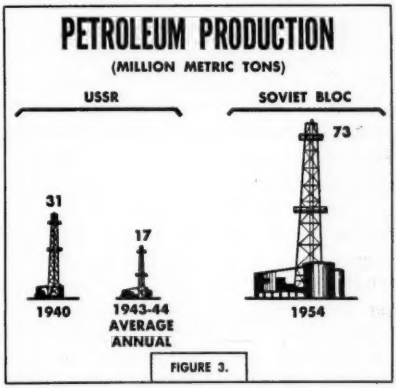

FIGURE 3.

European satellites and Communist China to the Soviet Union. In Figure 5 can be seen the increment to Soviet economic power gained when the Russians took over the European satellites. You can see that these East European countries have an economic strength which is a substantial part of that of the USSR. We estimate that it is one-third that of the USSR. Now this economic strength is not one that each satellite country can use as it sees fit, but is one that is being closely integrated into the Russian economic structure.

Between 1937 and the present time,

trade between the Eastern European countries, now known as satellites, and the other countries of the present Soviet bloc rose from 17 percent of the total trade of these Eastern European countries to 75 percent. (See Figure 6.) This illustrates how the satellite countries have been turned from their former western orientation and integrated into the Soviet world, economically as well as politically. The result has been a very substantial accretion to the Soviet economic strength. Even though there may be some question as to the contribution which the USSR can realize from the satellites in the form of effective military forces in the event of war, there is no doubt but that they can and do control the economy in such a way as to add materially to the Soviet economic strength now.

China is a different story. Whereas the satellites can be counted on in the net to contribute to the bloc economic strength, China's contribution is meager. However, there has been created a trade relationship of mutual benefit to each country. The Soviet Union provides China with military equipment, engineering products, and metals, while China sends to the USSR her traditional exports of tungsten, tin, textile fibers, and food products and does the fighting. This integration has been brought about by the natural political and geographical affinity for each other of these two Communist powers. The above development is well illustrated by the following data on foreign trade. Trade between Communist China and the rest of the Soviet bloc has expanded fivefold since 1950. Whereas in 1938 less than 5 percent of China's trade was with the USSR and Eastern European satellites, now 80 percent is so directed. From the above discussion on both the European satellites and Communist China, it can be seen that the Sino-Soviet bloc is striving to become well integrated economically, which reinforces and energizes the political domination in the case of the satellites, and alliance, in the case of the Chinese. Development of this intrabloc trade and self-sufficiency is one of the key elements in Soviet foreign trade policy.

### Expansion Prospects

Let us now look at the prospects for the future expansion of the basic economic strength of the USSR. You well remember that the situation looked very favorable for our side considering that United States economic strength is presently three times that of the Soviet Union, except that we must consider the use to which the Soviets put their resources and productivity.

We have examined one of these uses, the support and equipment of a huge military establishment. We will now take up the other top priority use, and the result thereof, to which the Soviets put their industrial product, namely capital investment. When applied to national economies, capital investment means that part of the national product used to manufacture more capital goods and put up more factories with which to augment production. This production of the means of production has been the foundation of their economic policy ever since it was put into operation in 1928. It has resulted in a fast growing economy, and it is continuing to do so. They will tell you:

*We know that you have more than we have now, but some day by following our 5-year plans, denying ourselves the material things of life, and expanding our industrial base, we will eventually be stronger and have more than you.*

And that is the root of the matter, will they?

Since the death of Stalin there have been significant changes in Soviet policies, both in internal and external affairs, of which the economic changes have been a basic element. The Russians have placed increased emphasis on the supply

of consumer goods and agricultural production, while maintaining the same long-range emphasis on investment. The heart of the new economic program is the effort to increase agricultural output, primarily by providing greater incentives to the peasant population in the form of goods and payments, channeling greater capital investment to agriculture in the form of farm machinery and fertilizer, and bringing under cultivation new areas of semi-

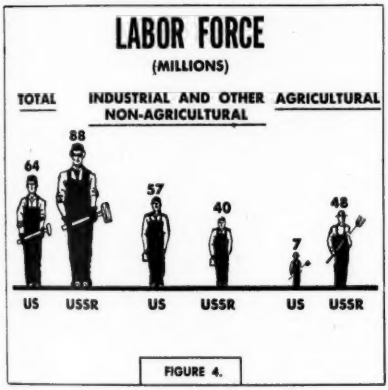


FIGURE 4.

arid virgin land in central Asia. An important concern of the Soviet regime is this inadequacy of agricultural production, which has not risen above prewar levels, and has been a critical limiting factor in the growth rate of Soviet labor productivity. The program is aimed at increasing the urban supply of food and other consumer goods and thus raising the per capita labor productivity by means of these incentives.

It is probable that the new program has included a leveling off of military expenditures at the high level attained during the Korean conflict. The significance of this leveling off is palliated by the consideration that plant capacity for conversion or reconversion to military production is growing. Further past and current levels of investment in the military sectors now permit production of large quantities of new modern military equipment. The new program, from all angles, should strengthen the economy, including its military sector, in the long run.

Our evaluation of the significance of present economic trends in the Soviet Union should be made against the background of the "use pattern" of resources over the past several years.

### Industrial Growth

The distribution of Soviet gross national product by final use is portrayed in Figure 7. Also shown is the equivalent distribution in the United States in order to add to the significance of the Soviet situation. In examining this chart, remember the previous discussion on the growth of industrial production. Gross national product is dependent upon and closely parallels industrial output. Since industrial production and gross national product have increased each year, except for the period of World War II and immediately thereafter, it means that each sector receives a portion of an increasingly larger whole; again with the exception of the war period.

The pattern revealed here has great significance. Although the consumer sector has consistently received a relatively low allocation of economic output, yet the regime has managed to obtain political stability and improve labor productivity. You can see that the economy is oriented toward maintaining a relatively large apportionment of its output to support of the military establishment and to capital investment. With an expanding economy there is room to maneuver and change emphasis depending on the demands of any given period. Since the regime, the economy, and the populace are accustomed by practice and habit to a relatively high proportion of military expenditure, it is unlikely that pressures will develop to reduce this proportion.

Let us now examine briefly the course of economic development in the USSR. In-

dustrial production must be discussed, for it is the most meaningful in terms of accomplishment, and our knowledge thereon is sufficiently complete and firm to permit its measure. The industrial production back to 1895 is shown in Figure 8, when it was in its early stages of development. Also is plotted the industrial production in the United States in order to place that of the Soviet Union in perspective. By showing both in terms of 1951 United States dollars, a comparison is possible. These graphs are plotted on semilogarithmic paper in order to bring out the growth rates.

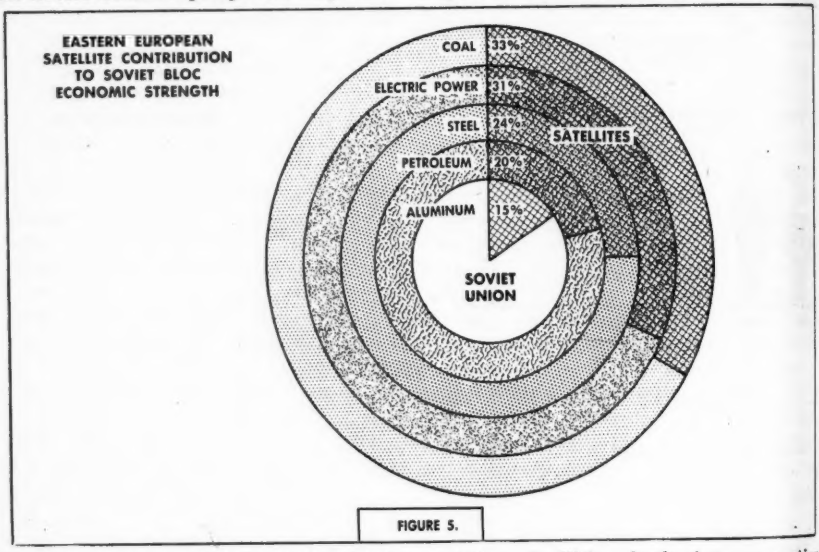


FIGURE 5.

It can be seen that the industrial output of each country reflects the political conditions under which each was attained. United States industry has grown at a rather steady rate, with short-term upward surges occasioned by war or booms and short-term depressions, which in the case of the 1929-32 depression was severe.

In Russia substantial progress was made in the period between 1890 and World War I, thereby creating the industrial proletariat from which the Bolshevik revolution drew a part of its strength.

For the period of World War I and the revolution the graph is plotted in a dotted line to indicate the lack of information for any particular year of this period, during which production dropped to a negligible amount. The period 1921-27 shows a high growth rate, which is deceptive in that it consisted of putting existing facilities back into operation. From 1928, when the first 5-year plan went into effect, real accomplishment was attained, with an average annual growth rate of 11.4 percent up until 1940. The Nazi invasion in 1941 caused a setback, for much of the producing area was overrun. The period 1944-46 shows a depressed effect in the aggregate caused by the difficulties of reconversion and relocation of industries, although steel production and some other basic industries raised their production. From 1948 to 1953 production regained its high prewar average annual growth rate of 11.4 percent with a tapering off toward the end of the pe-

riod. It is believed that this high growth rate will level off slightly during the coming years. The rate of industrial growth will exceed that of the United States, but our industrial increases in quantitative terms will be greater during the foreseeable future.

At this stage in the development of our economic knowledge on the Soviet Union, I do not believe that it is justified to project our estimates any further into the future for there are too many imponderables.

We have now completed our evaluation of the Soviet internal economy. It has been shown how the Soviet economic strength is now about one-third that of the United States, that it is expanding rapidly, and that the Soviets have been producing more military equipment than we, except during the Korean conflict. We have seen that the Russians are attempting to create an integrated Soviet bloc economy. We note that the post-Stalin regime is redirecting the economic effort to meet the demands of the long pull.

### Soviet Foreign Trade

We will now undertake an examination of Soviet foreign trade policies in order to see how they affect the nature and development of the Soviet economy, and to what extent such trade with non-Communist countries can further their objectives.

The traditional objective of Soviet trade is best expressed in the words of the Soviet economist, Mishustin, in his book, *The Foreign Trade of the USSR*, who states:

*The main goal of Soviet import trade policy is to utilize foreign products, and above all, foreign machinery, for the technical and economic independence of the USSR. The import policy of the USSR is so organized that it aids the speediest liberation from the need of import.*

In the great land mass of the Sino-Soviet bloc are found practically all the minerals necessary for the development of an advanced industrial economy. These minerals have not been completely developed, but dependence on outside sources in relation to total consumption is small and is limited to a very few items.

East-West trade consists primarily of an exchange of Western capital goods, industrial raw materials, and services, for coal and agricultural, forest and mineral products from the bloc. The West sends to the bloc not only industrial raw materials but also some items produced by advanced technology and by laborsaving manufacturing facilities and skilled labor, and receives in return mainly commodities requiring only limited capital equipment and unskilled labor. The value of these imports to the Soviet Union is derived more from the nature thereof than their volume, which is not great.

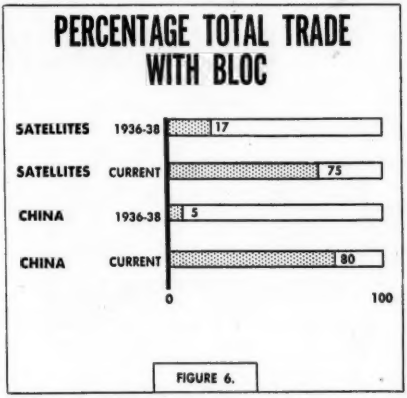

FIGURE 6.

For example, the Soviet bloc depends upon imports for only a small percent of its total supply of machinery and equipment, yet within that small percent may be certain types of items which the bloc urgently needs. Thus some specific items of import, although representing a minor share of total imports and an insignificant fraction of the gross national product of the bloc, may be of much greater importance to their economy and a much

greater threat to us than the money values suggest.

An important aspect of Soviet import trade objectives is the acquisition of advanced technological products in order to exploit the information gained therefrom in developing their own engineering products. An outstanding example of this was the Soviet purchase of the British *Nene* engine after the war, which advanced their techniques in the development of jet engines by perhaps 5 years.

We see then that the Soviet Union is not yet a great trading nation, and that she has engaged in foreign trade outside the bloc mainly to the extent necessary to strengthen and supplement her basic industrial structure. The trend and scale of trade of the USSR outside of the bloc is shown by the following data. In 1948 total Soviet trade, both import and export, with the West amounted to 1 billion dollars, an amount representing less than 1 percent of the foreign trade of the free world countries. This volume decreased to 700 million dollars in 1950 partly as a result of Western export controls but more importantly because of other factors, including Soviet objectives of bloc economic integration. In 1951 it started to pick up and last year it passed the billion mark. As a measure of the bloc economic integration, intrabloc trade expanded sixfold from 1948 to 1952. We must remember that one-third of the world's population is now within the Iron Curtain but only about 1 percent of the free world's foreign trade can reach them.

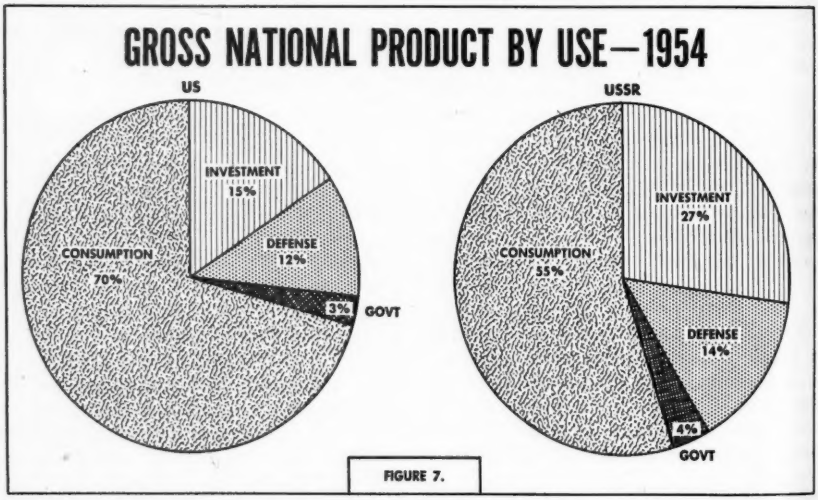


FIGURE 7.

### East-West Trade Pattern

In the foregoing discussion I have been treating the non-Communist world, which I have sometimes referred to as "the West," as an entity, without going into the trade patterns of the various countries represented. However, to see the entire picture we must examine the role of West Europe in East-West trade. It is the countries of West Europe which have traditionally taken the greatest part in the East-West trade pattern just described, and which have a natural economic affinity with the countries of East Europe and the USSR. This affinity is revealed by the fact that 7 percent of Western Europe's foreign trade was with the coun-

tries now behind the Iron Curtain, in the prewar era. Now this trade amounts to less than 3 percent. It is these countries which have pressed for increased trade with the bloc with the result that Western controls of exports to the Soviet bloc were relaxed somewhat in August 1954.

The foregoing description of the Soviet foreign trade has been concerned with traditional patterns and the dominant characteristic of present patterns. In 1953 and 1954, however, there was a deviation

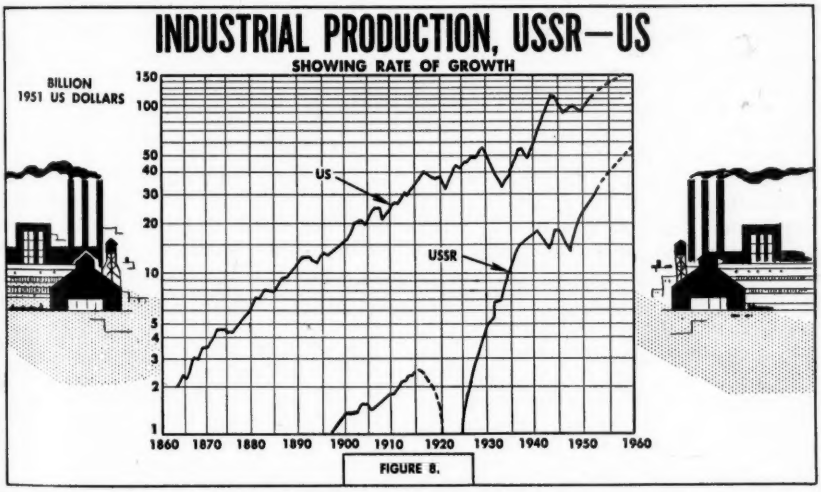


FIGURE 8.

of Soviet trade policy from the traditional one described earlier. Along with an increase in the level of trade with the West, there was intensified activity in other aspects of Soviet bloc economic relations with the free world. The number of trade agreements between the Soviet bloc and the free world increased markedly in 1953 and 1954. This year Soviet automobiles are being sold in Finland. They may be and are inferior to ours but the point is that to a Finn a Soviet automobile he can actually buy is preferable to a horse and buggy.

Soviet participation in international trade fairs increased. Soviet bloc missions were active in establishing new contacts in various parts of the free world. There is no indication that these activities will slacken in 1955. One aspect of the developments of 1953 and 1954 that may be expected to continue is the increased interest of Soviet bloc countries in the less developed countries of Asia and Africa, and to a lesser degree, Latin America, as illustrated by offers of technical aid.

The composition of recent trade has shown some deviation from the traditional postwar pattern in that the Soviet bloc has exported petroleum, manganese, and chromite, and has even agreed to export industrial machinery. Associated with the Soviet bloc consumer goods emphasis in 1953 and 1954 and the poor harvests of those years, increased quantities of food and consumer goods have been imported.

### Exploiting Trade Controls

The Soviets have not been slow to exploit the psychological impact of the wedge of proclaimed faith in free trade in order to press for relaxation of strategic trade controls, charging that they were arbitrary and unreasonable barriers erected

by the United States to prevent the mutually beneficial exchange of goods between East and West. This tactic could be of great potential effectiveness in achieving the bloc's primary trade objective of obtaining the unrestricted flow of strategic equipment and materials. The goal of unrestricted trade would permit an increase in the flow of strategic goods desired for the development of the internal bloc economy. They will seek to exploit this limited expansion in achieving local political advantage, for political activity and subversion are abetted by economic activity. Soviet capability to change world trade patterns is now limited. However, the new element which will appear on the scene is that of the fast growing Soviet economy. As the Russians raise their economic capacity, they will be able to manufacture goods which will compete with Western products in price, and being able to control the use of these goods, they can offer them for sale on the export market, while withholding substantial amounts from the domestic scene. Sufficient raw materials could be extracted from their vast resources so that they could create a surplus for export purposes.

In short, the Soviets will have an increased capability to pursue the objectives designed to cause relaxation of present trade controls and altering the world trade pattern. Of special significance is their ability even now, augmented as their economy grows, to concentrate their effort at economic penetration of a particular area. In the application of power, you do not dissipate your efforts in all directions and attack all along the line; you aim your efforts at specific targets for telling effect. It should be kept in mind that economic penetration of an area normally leads to more effective political and subversive activity.

Possible targets for exerting economic pressure are those countries which now carry on considerable trade with the Soviet Union: for example, Finland, Austria, Egypt, and Iran.

Also counted among these vulnerable areas are the Middle East, Southeast Asia, and Africa. You can see why it is of vital concern to the West that we intensify our efforts to improve the economic lot of underdeveloped areas in part so as to lessen the scope for politically inspired economic attention of the Soviet bloc.

This applies to the vast and important area of Latin America to our south as well as to Africa and those critical areas in Asia contiguous to the Iron and Bamboo Curtains.

### The Challenge Before Us

In summary, we need to give careful attention to not only the ideological challenge but to the economic challenge that lies before us, backed as it is by powerful military forces and subversive political activity conducted on a scale never before known.

Soviet trade proposals need the closest scrutiny as they seek principally to complement her present requirements to secure a vast expansion to her industrial base and increase her military potential despite the pitiful condition under which her own and the satellite peoples are forced to live.

The free world would welcome the removal of those barriers imposed by the Kremlin that prevent freedom of thought, speech, travel, or the press. While we should work hopefully for such goals, we would be less than naïve not to fully appreciate the challenge before us and not meet it vigorously whenever and wherever it appears.

Our salvation will depend on our alertness and our awareness of these serious problems now before us.

# RESERVE COMPONENT DUTY

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*The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.*

THE career management pattern of Army officers contemplates at least one tour of duty with a branch of Reserve Components of the Armed Forces of the United States. As the impetus of the Reserve Forces Act of 1955 is mainly on the United States Army Reserves (USAR), only duty with this branch will be discussed.

### Organization

The mission of the USAR is twofold: First, to provide units adequately organized, trained, and equipped, available for mobilization in the event of national emergency or war in accordance with the deployment schedule and capable of participating in combat operations in support of the Army's war plans and may include the defense of critical areas of the United States against attack; and second, to provide officers and enlisted personnel to meet planned requirements for trained fillers, specialists, and loss replacements until such time as individual requirements can be met through operation of other procurement programs.

To meet the requirements of the Reserve program as provided by current legislation, military districts are organized by states and the District of Columbia within each army area to supervise and coordinate the Reserve Components' Program. The Chief, (*state*) Military District, in addition to his administrative staff, has a senior army advisor (SAA) responsible to him for the supervision and coordination of the training of the Army Reserve. (Special Regulations 135-305-1, *Reserve Components, Military Districts.*) Authority to command is delegated by the army area commander to the chief, military district, who assumes command of all Active Army personnel on duty in his military district headquarters and with the SAA and his unit advisors.

An officer assigned to Reserve component duty will most likely be assigned to the office of the senior army advisor or to the detachment comprised of the unit advisors over which the SAA exercises staff supervision. The assignment is a stabilized tour and, within exigencies of the service, is normally a tour of 3 years for officers. An orientation course of instruction, as prescribed by the Continental Army Command, is given as early as possible to personnel assigned as advisors.

If you are assigned as SAA or one of his assistants, you are stationed near the military district headquarters. On the other hand, you may be one of several unit advisors stationed in a well-equipped armory in an urban area, or your station may be a leased "offpost facility" several

***The Army has been criticized for failure to provide a Ready Reserve. Officers assigned to Reserve component duty are faced with the challenge of proving what can be done to furnish a participating Reserve***

hundred miles from your source of administrative assistance and logistical support. Your staff may consist of one or several noncommissioned officer assistant unit advisors and unit administrative civilian assistants.

### Duties and Responsibilities

What are your duties? Yes, it is possible you may have heard about the days of Organized Reserve Corps duty when fishing tackle and golf clubs were the impedimenta of the unit instructor. That era was long before 1946 when the postwar Reserve program was inaugurated and the tempo of training began to gain momentum. You can be assured that the present Reserve component duty to which you may be assigned will demand all of the tact, diplomacy, and general military know-how you possess. As a unit advisor you have no command authority; yours is the duty of rendering advice and assistance to individual reservists and commanders of units assigned to your training center.

In this role you are a representative of the military district chief and responsible to him for promulgating the policy, doctrine, and directives forwarded you through the office of the senior army advisor. Most Army regulations with which you have become familiar throughout your military career are, for the most part, not applicable to your new assignment. The USAR is governed in general by the Army Regulations of the 140-series and in particular by Army Regulations 140-305, *Army Reserve, General, Organization, Mobilization, and Training.*

It is your duty to assist the units in maintaining supply records, correspondence files, and personnel records; in preparing training schedules, lesson plans, and payrolls; and in providing adequate facilities, aids, and equipment for training. These are the principle functions of an advisor. The closer you can coordinate the activities of your office with those of the unit commander and his staff, the more harmonious will be the over-all operation in accomplishing objectives of the USAR mission. It is imperative that as an advisor you do not attempt to assume the responsibilities of the unit commander. He and he alone is responsible for the administration, military discipline, health, morale, and technical and tactical proficiency of his unit.

In addition to the major duties previously enumerated, you must be thoroughly familiar with all phases of the USAR program to be a competent advisor on the myriad of individual questions you will be expected to answer. You must have detailed knowledge on recruiting, reserve obligations, and active duty and administrative function pay; assignments, attachments, and transfers; officer and enlisted promotion requirements; retirement, relief, and discharge; logistical support of the USAR program; annual inspector general and technical inspections; activation and inactivation of units; and organization for training.

### Organization for Training

The entire USAR structure is based on the annual Troop Program published by Department of the Army and on allocations of units and man-day spaces (each man-day space provides funds and training for one reservist for 1 day) to each

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army area. To accomplish the twofold mission of the Reserve program several media for training are provided. You, as an advisor, must be familiar with all types and the mechanics of implementation.

Units may be organized as tables of organization and equipment (T/O&E), divisional and nondivisional, or under table of distribution (T/D). Both the T/O&E and T/D units are organized on the same command structure as the Active Army with greatly reduced strength columns. Military intelligence units include counterintelligence, strategic intelligence research and analysis, and military intelligence service organizations (translator-interpreter teams).

Mobilization designees are individuals selected to augment T/D spaces of a specialized nature in army or higher headquarters on mobilization. The objective of their Reserve duty training is to maintain branch proficiency and qualify for the designated mobilization assignment. They may be organized into detachments with branch interests in common and trained under the senior officer present. Members of mobilization designation detachments are ordered to active duty as individuals and normally train with the proponent agency.

Reinforcement training units may be organized by the area commander for individual reservists for whom more effective or appropriate training is not available. This type unit is not a Troop Program unit, receives no pay, and individual members are ordered to active duty only as man-day spaces allow. The training program developed locally follows that of existing T/O&E and T/D units as near as practicable. It is the least satisfactory of the training media, but it provides a means of maintaining the interest of some reservists who would otherwise be lost to the program, and it also provides a source of reinforcements if needed.

Reserve officers may be selected and trained for utilization in research and development. Both mobilization designation detachments and reinforcement training units may program research and development. The mobilization designation detachments will be organized by the military district chief, and training materials will be made available by the Deputy Assistant Chief of Staff, G4, for Research and Development. The reinforcement training research and development detachments must receive final approval from The Adjutant General before the area commander organizes the unit. This program provides a means of utilizing professionally qualified reservists in research and development for peacetime assignments or mobilization designations. Training programs and projects are developed at the Department of the Army and Continental Army Command level, although the unit advisor has the responsibility to assist in processing of administration and ensuring that professional standards are maintained to accomplish the research and development training objective.

In an effort to foster a realization of and consideration for requirements of national defense by the civilian population, to utilize civilian industrial skills, and to train for mobilization units with support missions compatible with civilian industry, the Department of the Army has instituted an affiliation program. This permits sponsorship by a civilian industrial organization or governmental agency of a unit of the USAR. Affiliations are made by agreement of the sponsor and the Department of the Army. It provides the unit advisor with another medium for training. Petroleum laboratory units may be sponsored by an organization in the petroleum industry with many of the company's employees assigned as members of the unit. Training assemblies may utilize the laboratory facilities of the sponsor. This is but one of many potentialities for

the training provided through the affiliation program.

The unit advisor receives and makes recommendations on requests from reservists to attend regular, associate, refresher, and special courses conducted by service schools as well as requests to attend courses at army area schools, all of which are available within quotas of military districts.

There are also the USAR schools which are authorized in each army area contingent upon meeting enrollment and qualification requirements. The USAR schools are organized to provide branch and Command and General Staff College schooling for both unit and reinforcement Reserve officers and to provide military occupational specialty training for enlisted reservists. They parallel the resident associate courses at service schools and provide a progressive course of instruction through 6 years of branch training (3 years' basic and 3 years' advanced) and an advanced curriculum of 5 years' Command and General Staff College training.

Training projects may be assigned to provide training for mobilization designees who are not members of detachments, selected scientists, administrative specialists, selected reservists unable to participate in appropriate inactive duty training, and to utilize the specialized capabilities of still other reservists. These training projects will either be initiated by the reservist or prepared and processed by proponent agencies through the Continental Army Command. Retirement credit will be authorized and work must be completed at other than training assemblies. Unit advisors can utilize this means of training for qualified reservists in areas where unit training cannot be made available, or when the individuals concerned cannot fit existing unit vacancies.

The last but not least on the list of training media available in the Reserve organization for training are the Army Extension Courses. The unit advisor should continually encourage reservists to take advantage of this method of continuing their military education and maintaining a close contact with current tactics, techniques, and material. For some individuals in remote areas, these extension courses offer the only available method of maintaining their military proficiency and earning retirement point credits. Although the work on these courses is accomplished on the reservist's own time and not during scheduled training assemblies, he receives credit for the work satisfactorily completed on the basis of 1 point for each 3 rated hours. Prior to the close of his retirement year, the service school concerned transmits a certificate of credit hours completed to the headquarters maintaining the retirement records of the individual. Applications for these courses are to be forwarded through channels. For reservists assigned to units, this channel is through the unit commander to the unit advisor, then direct to the school concerned. For reservists not assigned to units, the channel is through the military district headquarters to the service school. However, the unassigned reservists can be assisted by the unit advisors in preparing and forwarding the applications for extension courses.

### Training Directives

Training memoranda based on Department of the Army policy are published at Continental Army Command level. The Army Training Program, published at Department of the Army level, provides guidance in the preparation of unit training programs and schedules and in the conduct of training specific T/O&E units of the Active Army and Reserve components. (Army Training Programs supersede the Organized Reserve Corps Training Programs.) The master schedule in each Army Training Program is no different in scope for the Reserves than for

**USAR units accomplish their training at authorized assemblies of not less than 2 hours' duration. Above, is shown a typical off-Post leased facility. Below, is an artist's drawing of a USAR Armory which can be expanded to a 400-600-800-man series. The vehicle sheds in the rear are for storage and practical work on maintenance.**

the Active Army except for the total hours devoted to required subjects.

Army Subject Schedules are published by the Department of the Army in support of Army Training Programs for the purpose of ensuring maximum uniformity of training for all components of the Army. They are guides for the instructor in preparing lesson plans and scheduling periods of instruction. (Army Subject Schedules supersede Organized Reserve Corps Subject Schedules.) Each subject schedule is for a specific subject and includes a training chart with references, training aids, and equipment for each period, in addition to a lesson outline for each period.

As a unit advisor you must approve the quarterly training schedules of the USAR unit based on the previously mentioned directives and those prepared at army area or district level. Due to the problems that are peculiar to each unit, the breaking down or altering of some of the training periods result from your interpretation of the intent of directives and good judgment.

As it is often difficult for Reserve instructors to preview training films, you must be familiar with and provide the instructor with "Instructors' Film References" available at film exchanges. This reference provides the instructor with the necessary introduction, critique, and examination for a specific film without preview.

### Types of Training

The USAR units accomplish their training at authorized training assemblies of not less than 2 hours' duration for Reserve duty training (until recently known as inactive duty training). Active duty training is provided for annually at camps or Active Army establishments for 15-day periods. Variations of the Reserve duty training can be accomplished by using split assemblies, multiple drills, or weekend training.

As a unit advisor you must actively supervise all phases and types of training. You must assist unit commanders and training officers with the planning of training and make available to them the best possible facilities, training aids, and training equipment with which to accomplish their mission.

### Future of the USAR Program

For many years the Active Army establishment has stressed the need for adequate legislation on which to build and maintain a "Ready" Reserve force. It is believed that the Reserve Forces Act of 1955, signed by President Eisenhower on 9 August of that year, will be the answer to the majority of the problems in providing a participating Reserve.

The officer assigned to Reserve component duty is now faced with the challenge of proving what can be done. If you are that officer, you must be cognizant at all times that you are dealing with a citizen soldier who is devoting a portion of his social or professional time for either a military avocation or a patriotic obligation. The success or failure of units assigned to your training center is dependent to a large degree on your method of operation. The obstacle of personalities must be overcome for a clash between the unit advisor's staff and reservists whom they serve can easily break the morale and efficiency of any unit.

The Reserve commander with his officer or enlisted staff can do his part in avoiding friction by a close understanding of the responsibilities of the unit advisor and by cooperating in complying with directives. The unit commander must take necessary action to replace ineffective personnel, correct uniform deficiencies, late arrival or failure to attend assemblies, and poorly prepared instruction. This should be done without the advisor having to recommend the corrective action.

As the advisor you can eliminate un-

necessary friction by a closer understanding of the reservists' problems. There is no directive or regulation charging the unit advisor with maintaining administrative or supply records of the units. However, in the limited time available to them, it is not possible for Reserve units to maintain all of the records required. When an organization is making a conscientious effort to do so, then it behooves you as an advisor to physically assist in the administration.

Teamwork is the motto in a proper working relationship between you and the reservist. The unit advisor who maintains all of his units' records to present a good front or to be popular is defeating the purpose of the advisory assignment and is not helping his units. If advisory personnel maintain all the unit records and are transferred, or if the units are mobilized for duty and are unable to function, it is only the fault of the advisor. Conversely to assume the attitude that the unit commander receives administrative pay for preparing and maintaining records and can, therefore, rise or fall on his own merits is contrary to the spirit of the advisory assignment.

Where is the happy medium? It cannot be found in regulations nor can anyone provide a formula for you as an advisor. Knowing your job thoroughly is a prerequisite. The implementing of directives through fair but firm means, always judging each situation separately, will result in as near the solution as anything that can be said.

Within another 2 years thousands of young men will be participating in the Reserve units for which they originally enlisted subsequent to either 6 months of active training or a 2-year period of active duty. The USAR unit commander is responsible for the military future of these young men and for providing them with the same high standards of discipline and training as they received on active duty. However, as unit advisor it remains your task to provide facilities, assist in planning, and supervise the over-all program at your training center for those units assigned. Only a few months have passed since the adoption of the Reserve Forces Act; and even before it has had a chance to prove its effectiveness, criticism has been placed on the Army for failure to provide a "Ready" Reserve.

Unit advisor USAR, and those who will join your ranks on assignment to Reserve component duty, the challenge is yours—meet it.

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**The basis of the tremendous expansion of the Army that would be immediately necessary in the event we become involved in war would have to be our National Guard and our Army Reserve. The size of the Active Army we need to provide national security depends absolutely upon how large, how well trained, and how well equipped are the Reserve forces which supplement it and how quickly they can be mobilized in an emergency.**

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**Actually, we will never get the kind of a Reserve we need through the operation of any law. We are not a militaristic people, and we are irked by military requirements in peacetime. We will not have a proper military Reserve until the people of this country truly understand how essential it is to our security, until they see clearly that it will be very costly, perhaps fatal, in the event of war if we do not have it. When they do understand, they will get behind it, and support it.**

*Under Secretary of the Army Charles C. Finucane*

# FROM KNOWLEDGE THE POWER OF DECISION

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*The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.*

THE Army school system which was superbly designed to prepare officers for success in battle has devoted little time to preparing officers for their managerial responsibilities. Until the establishment of the Command Management School (CMS), nowhere in the Army were we concerned with the systematic preparation of an officer for the tremendously important task of managing an installation.

Why all this *emphasis on management* in the Army?

Within the span of two decades, our Military Establishment has become the biggest business enterprise on earth. The Department of Defense will spend 37 billion dollars during the current fiscal year for its operations and military assistance programs—about 60 cents of every dollar expended by the Federal Government. It will buy one-tenth of all the goods and services produced by the United States during this year. Its employees, military and civilian, total about 4.3 million people. Its civilian employees alone are one and one-half times the number of production workers in the entire automobile manufacturing industry. The current replacement value of its assets, including the land, buildings, inventory of supplies and equipment of the Army, Navy, and Air Force, is roughly estimated at 155 billion dollars. This is a colossal business, and like any large enterprise demands high skills, efficiency, and good management.

### Dual Responsibility

Under present circumstances the Army officer's job is dual in nature. His primary responsibility is to be professionally qualified to lead men in battle. To this end our efforts must be unceasingly devoted, and we must guard against conditions which would result in our officers and commanders knowing a little about everything except how to win battles.

On the other hand effective and efficient leadership in nontactical situations is an important secondary responsibility of Army officers. It is estimated that the average officer spends 28 or 29 years of his 30-year career in nontactical situations. During much of this time he is assigned to management duties.

Despite this fact, until very recently technical and administrative branches had only limited management training programs, while line officers from whose ranks are selected many of our installation commanders and Pentagon managers had no opportunity for management schooling.

To achieve the management training goals, the CMS opened on 29 November 1954. By the end of this academic year

more than 50 generals and 1 out of every 8 colonels on active duty in the Army will have attended the school.

The Honorable Wilber M. Brucker, Secretary of the Army, while discussing business management problems of the Army in an address to the CMS on 7 September 1955, said: "It is imperative that *every* commander and staff member concerned with the solution of these problems have the same forward look."

A heavy responsibility has thus been placed on the officer corps of the Army. We cannot rest on our laurels or point to past performance. A new management era has dawned. The commander of a large training installation, entrusted by the Government with responsibility for the expenditure of millions of dollars, cannot say that he has no time for these "new-fangled" management ideas because he has soldiers to train. Nor can a post commander dismiss his budget obligations by delegating this vital responsibility to his comptroller. Today, "the commander, not the comptroller, is the manager of an installation."

### Management Obligations

It is difficult to point out failings in the management of our installations without bringing down an angry chorus on one's head. Actually I strongly support the view that the management of our Army has been good, and that our commanders are and have been intelligent, capable managers. However, in these days of momentous changes, new requirements call for new approaches, mental flexibility, and rapid adjustments. As might be expected a few are slow about getting into step. And so, it is not without some justification that congressional committees and national commissions have been critical at times of the officer leadership in managerial positions. If we ever forfeit the command, or call it management if you will, of our military installations to an outside agency, it will be because we, the men in uniform, have failed in our secondary responsibility as officers. If it comes to pass that the Army someday is reduced to tenants on its own stations, it will be too late to argue that the new business management methods and techniques are no good.

Nor can we minimize or evade our management obligations by seeking shelter behind training missions or combat requirements. To quote General Matthew B. Ridgway:

*This emphasis on combat requirements does not decrease the importance of good management in our Army, but rather highlights its great importance. Every increase in effectiveness, every dollar saved, every wasteful practice eliminated, means just that much more effort can be channeled into increased combat capabilities of our Army. This is the purpose of command management.*

All these factors in recent years have focused increasingly critical attention by the Army on its management practices and on the management capabilities of its commanders. New management tools and new procedures in such areas as planning and programing and financial management are being carefully fitted into the tested management structure of our posts, arsenals, and depots. Although the Pentagon insists that these new tools are designed to give the commander more author-

***Complexity of logistics and the magnitude of our Military Establishment make it necessary for alert military leaders to balance their skill in tactics and logistics with proficiency in comprehensive management***

ity and greater latitude of decision, too few commanders know what these tools are or how to use them. Integrated accounting, stock funding, industrial funding, consumer funding, and the budget execution plan are all new and disturbing words. Yet they represent a system of business management developed within and by the Army which can give the commander more and better information on which to base his decisions—decisions that he alone must make.

The fundamental purpose of the Command Management Course, therefore, is to assist key officers to increase their present skills and to acquire new skills that will help them to discharge their command responsibilities in a more effective manner. The subject matter of the course deals with practical problems of command. It is designed to help commanders to handle the technical and human problems involved in directing the work and efforts of military and civilian personnel at station level. The course material, the school facilities, and the informal atmosphere are especially prepared to stimulate independent thinking.

It has been our experience that if commanders and other senior officers and civilians can set aside some time to think about the nature of their responsibilities, the extent of their obligations, and the method by which they might satisfy both, they will gain a greater confidence in themselves and will do a better job. We believe that if an officer is given an opportunity, as he is at the school, to see his job in clear perspective, to study its components in relationship to each other, and to test his ideas on the critical anvil of his classmates' experiences, he can attain far greater satisfaction from his work and sharpen his over-all performance.

### Curriculum

The curriculum of the 3-week course of instruction is divided for purposes of presentation into four major fields: General Management, Planning and Programing, Financial Management, and Manpower Management. General Management includes such areas as organization, development of a management team, problems of line and staff, public and congressional relations, and development of subordinate executives. Planning and Programing includes the management cycle and the Army program system, tracing the problems incurred at each successive echelon. Financial Management covers the areas of the new business tools and techniques which are being introduced into the Army, including discussion on such subjects as financial inventory accounting, internal audit, industrial funds, and consumer funding. Manpower Management deals with manpower resources and manpower policies and controls. While the subject material is divided into the component parts described above, the course of instruction is integrated to present a dynamic study of management. With emphasis placed on problem solving rather than technical details, the course effort is directed toward improving the decision-making ability of the participants.

How is this accomplished?

From the moment it was decided that our commanders and senior staff officers

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needed management training, it was apparent that these men of 20 or 25 years' experience, holding high rank and key positions, would not react favorably to traditional methodology. They could not be lectured to and would certainly resist education by definition. They would be unlikely to accept dictums from any instructor. Accustomed to command responsibility, they are experienced men who have met and solved problems of varying degree of complexity. It was essential, therefore, that in this course of instruction, the participants have maximum opportunity to discuss the management problems that they have encountered, and to test their ideas and actions against the views of other members of the class. This in short is the essence of the case method of instruction.

### Case Method

This methodology is uniquely suited to meet the objectives of the CMS. Although the name of the instructional method may be unfamiliar to some, the process of the case method is not entirely new to officers. The Army school system has long utilized a problem-solving approach requiring students to think problems through to a logical conclusion. The analysis of management cases is not unlike the approach taught in the "estimate of the situation." It avoids academic generalization and requires a practical, problem-solving orientation. At the CMS it provides for sharing of knowledge and comparing of experiences among a diversified group of officers and civilians from the Pentagon and from the field, from staff and command positions, from the line, and from the services.

Pioneered by Harvard University the case method is especially suited to executive training. It is now utilized by a large number of our universities and has been successfully adapted by modern industry for its in-training programs. It suggests broad possibilities as a training method in the Army, especially for evening Reserve officer training programs. The CMS is now engaged in assisting in some of these programs.

The cases studied at the CMS are uniquely Army cases reflecting actual management situations encountered in the Army. They serve the dual purpose of providing a vehicle for broad management discussions, and a means for introducing the participants to the new business tools and techniques now being adopted by the Army.

For the benefit of those who may not be familiar with the case method of teaching, permit me to discuss briefly the process.

The case is a written account of an actual situation which causes the commander or administrator in the situation to grapple with a management problem. It is written in such detail as may be appropriate to describe the situation, relating the events and difficulties encountered by the responsible executive. The problem itself may not be clearly defined, as is often the actual situation, and the participant may be compelled to determine what is the problem. The basic aim of the case is to present the facts that were known to the executive for his analysis and decision. Typically the decision is not included in the case; it is usually left for the participant or group to determine, or if a decision is given in a case, the group discussion may then be focused on the validity of the decision.

During the course of instruction the participants at the CMS study and discuss approximately 50 cases or management situations. Three or four cases are usually assigned for daily discussion. In the afternoons, which are scheduled for individual preparation, the participant studies the assigned cases and reference material. In the evening as a member of one of the five lounge discussion groups into which each class is divided, he discusses the

assigned cases under the informal supervision of a student group leader. The following morning (6 days a week) the class, assembled as a unit under the guidance of a faculty member, discusses the cases previously studied. The facts are appraised in each situation and participants not only suggest the course of action they recommend but vigorously defend their views and ideas against the criticism of other members of the class. Although the discussion in any particular case may lead to a decision or solution acceptable to all or a majority of the class, the exercise is not intended to culminate in an approved solution. No approved solution is ever announced by the school. It is our firm belief that the prejudices and complexities of human relations can seldom be resolved in one correct answer.

### Role of Instructor

The instructor at the CMS plays a much different role than in the conventional lecture or conference method of instruction. In the case method it is essential that the discussion leader create a permissive atmosphere in the class. He serves as a catalyst, stimulating thinking and encouraging expressions of conflicting points of view. He is responsible for directing the movement of learning. Thus he guides the discussion without controlling the flow of ideas or views. As a responsible member of the discussion group he may express his own opinions, but typically he refrains from interposing any judgments or from asking leading questions designed to elicit a particular response. His main objective is to ensure that the ideals and concepts expressed by members of the class are understood and fully explored.

It is apparent that in the case method of instruction the quality of the discussions and facility for learning is governed essentially by the level of experience, knowledge, and wisdom of the participants. At the CMS the individual has an opportunity to test his ideas and concepts against the views of colleagues who in total represent over a thousand years of experience. The interchange among the class members defending their respective orientations leads to clearer perception of problems and sharper focus of decisions.

The CMS is a Continental Army Command (CONARC) school. Fifty participants are selected for each class on quota allocated to the Department of the Army, CONARC, major commands, technical services, and the Navy, Air Force, and Coast Guard. In the course directive, emphasis is placed on the participation of installation commanders (post, arsenal, and depot) and key officers and civilians who occupy, or are on orders to occupy, a supervisory position with management responsibilities. The typical class includes 2 or 3 generals; 30 or more colonels and Navy and Coast Guard captains; 8 lieutenant colonels and commanders; and 8 civilians GS 13, 14, and 15.

### Participants Comment

It might be interesting to read the comments of some of the participants who attended the school. In response to questions regarding the value of the course they stated:

*The course is of value to find out how the other fellow is handling the problems we are all faced with in our daily work.* (Commanding General, Class I installation.)

*It has provided a broadened horizon, has brought to light many new ideas which I can adopt, and has given me a better understanding of the management functions to be implemented by my specialists in those fields.* (Commanding General, Class II installation.)

*The course would be of future value to any officer, particularly a line officer with little technical and administrative staf*

*experience.* (Commanding General, large training installation.)

*The principal value of the course to me has proved to be the things I learned about management from the open discussion of command problems peculiar to the commands at station level. I found many practical solutions to common problems are in existence, but to date cannot be found in manuals or regulations.* (Colonel, now commanding an Airborne Regimental Combat Team.)

*The course of instruction at the CMS has been most helpful to me in providing an opportunity to get the point of view of other members of the staff and field organizations. The exchange of experiences, views, and ideas with these senior officers is an opportunity not generally afforded any individual.* (GS 15, Division Chief, Department of the Army.)

### Missionary Enthusiasm

Among the graduates of the CMS there has been born a contagious, missionary enthusiasm for scientific management. The resistance to the new financial management tools which was vociferous and sometimes belligerent in the early classes has given way to cautious acceptance. As the commanders, chiefs of staff, and other key officers complete the short courses of instruction, there is increasing evidence of Army-wide interest and appreciation of the new business management techniques and procedures. A spark has been kindled which encourages consideration of every aspect of management in the light of future requirements rather than traditional approach.

Not so many generations ago the commander of a military force, although recognizing the importance of politics, strategy, morale of troops, and other basic factors of war, was concerned primarily with the maneuver of his units, that is, tactics. If he were a good tactician, he was a victorious general whose name survived in history. As weapons became more complex, the trains of the field forces grew and it became necessary to establish depots and arsenals, located on lines of communications, for ready resupply of the fighting forces. Supplies and equipment multiplied; the manpower, transportation facilities, and industry of entire nations were mobilized. Military forces in the field no longer could maneuver at the will of the commander; they became more and more dependent upon an old factor in war—logistics. The logistician of the force in many situations now dictated the tactics which could be executed, and the commander who still made the decisions had to know logistics as well as tactics to win battles.

### Conclusions

As tactics begot logistics, so the complexity of logistics and the magnitude of our Military Establishment have ushered in a third military factor—scientific management. The alert military leader must balance his skill in tactics and logistics with sound proficiency in comprehensive management.

The concluding paragraph of a letter written by the Honorable Charles E. Wilson, Secretary of Defense, to the Secretary of the Army on the occasion of the beginning of the second academic year of the CMS is a fitting conclusion to this article.

*No policy or program, however good, will produce the desired results unless it is thoroughly understood and accepted and conscientiously applied by the people in the field who actually do the work. I am confident that as more and more command and staff personnel, especially installation commanders themselves, attend the Command Management School, it will become a dominant influence in assuring the Nation adequate military security without the sacrifice of economic stability.*

# WAR WITHOUT VICTORY?

Colonel T. N. Dupuy, *Artillery*
Professor Military Science and Tactics, Harvard University

*The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.*

THE latest edition of Field Manual 100-5, *Field Service Regulations, Operations,* is a very fine manual indeed. It is reassuring and comforting to read its sound, forward-looking exposition of current Army doctrine. Thoughtful soldiers will appreciate the restatement of the principles of war as fundamental truths proved by the lessons of history; and will approve clearly expressed recognition that these principles are no magic formulae for victory, but rather must be applied in constantly changing tactics and techniques adapted to the most modern developments of science and technology. The text properly points out the adaptability of ground forces to differing requirements of political policy; it firmly asserts the inescapable fact that ultimate decision in war must be achieved—or achievable—on the ground; and it recognizes Army capabilities to destroy instruments of enemy political power without wrecking the economic and social bases upon which postwar peace must be built.

Yet in this splendid manual one can perceive "a cloud no larger than a man's hand." This is Army doctrine for leaders of the United States Army in combat operations. Yet—admittedly only in one or two instances—there are indications that the text is catering to a wider audience, apparently to those who might not understand or be sympathetic to the forthright statement of some of the fundamental truths which are so well expressed in other parts of the book. In this respect one wonders if the manual is trying to "sell" possible critics, to reassure them as to the liberality and unregimented nature of the "military mind."

### A Cloud

One wisp of this cloud is apparent in the discussion of "persuasive leadership." One wonders if even the authors of the manual are really persuaded by their own arguments.

More serious, however, is a startling statement as to the relationship between victory and national objectives: "Victory alone as an aim of war cannot be justified, since, in itself, victory does not always assure the realization of national objectives."

This statement, it should be noted, is a gratuitous addition to some previous sound and commendable remarks as to the versatility of Army forces employed in limited wars, and concerning the proper relationship between military force and political objectives. It is not easy to understand why a manual on Army doctrine should elaborate upon this theme by implying that soldiers need not concern themselves with an apparently outmoded concept of "victory."

Practically everything else in the manual is antithetical to this suggestion that our political and military policy can envisage committing Americans to armed conflict for objectives which do not warrant energetic and successful prosecution of the conflict. Why, then, was it made?

Brushing aside possible superficial interpretations, the real reason for this depreciation of the importance of victory would appear to be to try to explain what happened in Korea. This might have been done not only for the purpose of preparing the disillusioned soldier for possible comparable frustrations in the future, but also to make clear to others who might read this manual that Army doctrine recognizes the validity of Clausewitz' dicta on the relationship between war and policy.

Desirable as it may be to condition the soldier to a philosophical acceptance of the possibility of future Koreas, this should not be done by undermining the validity of the principle of the objective in a cryptic statement which fails to explain why victory eluded us in Korea. It is even more dangerous to create in the minds of soldiers and civilians alike a mistaken idea as to what Clausewitz meant in his statements on war and policy.

Whether or not the concept of war without victory, as expressed in the new Field Manual 100-5, was inspired directly or indirectly by the theories of Clausewitz, it can best be evaluated in terms of his philosophies. Clausewitz' studies were undoubtedly the most profound analysis ever made of the art of war, and he devoted more attention to the relationship between war and national policy than to any other single aspect of war. Furthermore, although some of his ideas on tactics and techniques may be as obsolete as the weapons and technologies of his time, the validity of his general philosophical remarks has been incontestably proved through the experience of world history to this very day. Simply because they are valid, however, and invariably stand up in terms of past experience, does not make them clear and readily understandable. Clausewitz is hard reading—and a little Clausewitz may be a dangerous thing.

In his excellent article, "War as a Continuation of Politics," which first appeared in the Spring 1954 issue of *Military Affairs* and was reprinted in the February 1955 issue of the MILITARY REVIEW, Colonel V. J. Esposito discusses Clausewitz and his interpreters. Colonel Esposito, a leading professional Army student of war who served before and during World War II as Chief, Logistics Plans Group of the Operations Division of the War Department, and who is presently Professor of Military Art and Engineering at the United States Military Academy, had this to say concerning Clausewitz:

*Being very much an intellectual, his work contains countless penetrating reflections and observations which require concentrated study and analysis to comprehend fully. One must also be alert to note whether Clausewitz' observations refer to tactics, to military strategy, or to national strategy and policy, as his opinions on one may not apply to the others. The book* [On War] *is also replete with attractive catch phrases and forceful expressions which are frequently accompanied by less conspicuous but significant qualifications. All these characteristics make it possible, by judicious selection from among the wealth of material, to develop philosophies which can be attributed to the author but which do not accurately reflect his views.*

***Limited political objectives may require limited military objectives. In war a military objective must be gained by combat, and in that combat every will, effort, and energy must be directed toward victory***

This comment would appear to be in some measure applicable to the idea of war without victory as expressed in Field Manual 100-5. Wittingly or unwittingly,

the authors have been influenced by the frequently quoted convictions of Clausewitz to the effect that limited political objectives in war require equally limited military objectives. It is true that in support of this thesis one could select a multitude of comparable passages from *On War*. For instance:

*The political object as the original motive of the war will be the standard alike for the aim to be attained by military action and for the efforts required for this purpose.*

In another place Clausewitz writes:

*As war is no act of blind passion, but is dominated by the political object, therefore the value of that object determines the measure of the sacrifices by which it is to be purchased. . . . As soon, therefore, as the expenditure of force becomes so great that the political object is no longer equal in value, this object must be given up, and peace will be the result.*

Again he insists:

*He who undertakes war . . . acts to a certain extent upon the principle of employing only such forces, and having only such a war aim in mind, as are just sufficient for the attainment of his political object.*

If these, and many similar remarks, were all that Clausewitz had to say on the subject, a soldier would have some difficulty in insisting that the principle of the objective requires victory as the aim of military action. If such were the case, one would be forced to try to prove that Clausewitz did not mean his words to be interpreted in this fashion, or else to attempt to discredit him—no easy task.

Fortunately, however, the Prussian military philosopher himself comes to the aid of such a soldier, because he makes a clear distinction between what he terms the "ends of war," and the "means" for achieving the ends. A careful reading of the book makes clear Clausewitz' conviction that military objectives must always be subordinate to national policy aims, but that the "conduct of war" to achieve these objectives—whether limited or unlimited—must strive audaciously and aggressively to achieve a decision through victory. He emphasizes that this determination to achieve victory is essential even under those circumstances where political policy demands a negative, or defensive, military objective. Two quotations will make clear Clausewitz' ideas on the importance of victory in military operations:

*In a word, the destruction of the enemy's forces seems among all the objects which can be sought in war always to be that which overrules all else.*

In the elaboration of this theme, he writes:

*Engagement is combat, and in this the object is the destruction or the overcoming of the opponent; the opponent in a particular engagement, however, is the military force which stands opposed to us. . . . Every engagement, great or small, has its own special object, which is subordinated to the whole. If this is the case, the destruction and conquest of the enemy is only to be regarded as the means of gaining this [over-all] object, as it*

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*unquestionably is. . . . But we maintain that the direct destruction of the enemy's forces is everywhere the predominating thing; we contend here for the predominating importance of the destructive principle and nothing else.*

### Korean Stalemate

It is possible that some soldiers may still find it difficult to reconcile American acceptance of a stalemate in Korea with the concept of striving for victory in pursuit of limited military objectives. They may wonder whether Clausewitz' ideas are really applicable to that peculiar situation. This can best be set in proper perspective through the words of the Prussian military thinker, and by testing their applicability to another war. He wrote:

*We must perceive the necessity of every war being looked upon as a whole from the very outset, and that at the very first step forward, the commander should have the end in view to which every line must converge.*

This is a splendid statement of the principle of the objective. He adds, however, that although the objective should be clear at the start, it may be necessary to make subsequent modifications:

*The original political intentions change very much in the course of the war and may at last become totally different,* just because they are partly determined by the successes and by the probable results.

The profundity and validity of these statements is readily perceived if we look back briefly upon the experiences of our war with Japan, as well as those from the conflict in Korea.

We went to war with Japan in December 1941 because our national honor would not permit us to accept the indignity of the disaster at Pearl Harbor and, more important, because this had been evidence of an intolerable threat to our national security. Our initial objectives, therefore, were not only to obtain revenge, but to destroy Japan's capability to continue this threat.

It is evident that in this war against Japan, as in that against Germany, our initial policy objectives were not so clear as Clausewitz suggested they should be. On the other hand it is equally clear that our political intentions—whether vague or specific—did change for the reasons he indicated. For instance, early in the war "unconditional surrender" became an objective. After our sad experience with the results of this in our war with Germany, we significantly modified our objective against Japan to one of negotiated peace on clearly defined terms of surrender. We did this not because it was beyond our power utterly to destroy Japan and her armed forces, but because this seemed unnecessary as a political objective, and because we saw no good political or military reasons for requiring the sacrifice in men and effort which would have been entailed in the remorseless pursuit of the unlimited objective of "unconditional surrender."

### Objectives

There is no need to recount here the way in which our political objectives in the Korean conflict were even more significantly modified from time to time on the basis of "successes and . . . results." It is most rewarding, in the light of these changes, to review Books I and VIII of *On War*; in particular, every officer should be acquainted with Clausewitz' views on limited war, if only because the latest Field Manual 100-5 stresses the possibility that we may be involved in more Korea type conflicts in the future. This leads us to one more quotation from *On War* to establish the consistency between a military stalemate as an objective of policy, and victory in battle as the means to the objective:

*We see then that there are many ways*

*to our object in war; that the defeat of the enemy is not in every case necessarily involved; that the destruction of the enemy's military forces, the conquest of enemy's provinces, the mere occupation, the mere invasion of them, enterprises aimed directly at political relations, and lastly a passive expectation of the enemy's onset—that all these are means which, each in itself, may be used to subdue the enemy's will, according as the peculiar circumstances of the case lead us to expect more from the one or the other. . . .*

*The engagement is the sole effective activity in war; in the engagement the destruction of the enemy forces opposed to us is the means to the end. It is so even if the engagement does not actually take place, because at all events there lies at the root of the decision the assumption that this destruction is to be regarded as beyond doubt. It follows, therefore, that the destruction of the enemy's forces is the foundation stone of all action in war, the ultimate support of all combinations, which rest upon it like the arch on its abutments. All action, therefore, takes place on the assumption that if the decision by force of arms which lies at its foundation should actually take place, it would be a favorable one. The decision by arms is, for all operations in war, great and small, what cash payment is in bill transactions. However remote these relations may be, however seldom the settlements take place, they must eventually be fulfilled.*

### Field Manual 100-5

On that note, therefore, we can leave Clausewitz, and return to reach a conclusion regarding the questionable statement in Field Manual 100-5.

Field Manual 100-5 is intended to be the Army's doctrine for the use of Army forces as an instrument of national power. It is, therefore, properly concerned with the conduct of war, or, as Clausewitz puts it, with the "means" of war. For the most part, as we have noted, the manual does this, and very effectively. Furthermore, it is quite appropriate that there be an introductory statement regarding the relationship between national policy and the Army's basic doctrine as an instrument of policy.

Let there be no confusion, however, as to policy and doctrine. It is well and good to make clear that limited political objectives may require limited military objectives. However, let us not, for the sake of our country and those who have died to protect and preserve it, allow any misunderstanding as to *how* the military objectives—whether positive or negative—are to be achieved.

In war a military objective must be gained by combat, and in that combat every will, effort, and energy must be directed toward victory.

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## AUTHORS

**Authors submitting materials to the MILITARY REVIEW are requested to forward manuscripts through the Security Review Branch, Office of Public Information, Office Secretary of Defense, The Pentagon, Washington 25, D. C.**

# WORK WANTED

Lieutenant Colonel Mitchel Goldenthal, *Corps of Engineers*
Faculty, Command and General Staff College

*This article is in consonance with current instruction at the Command and General Staff College.—The Editor.*

(ADVERTISEMENT)

> WORK WANTED
> 843 soldiers who can build and fight, work day and night, travel light. . . .

A MAJOR general responsible for organizing an infantry division would be most likely to answer the above advertisement quickly for it would solve one of his most pressing requirements. It would also satisfy a particular need of this infantry division commander in defensive operations for these 843 soldiers are the combat engineers found in the divisional engineer combat battalion.

The proper utilization of the divisional engineer combat battalion can add immeasurably to the efficiency and success of the infantry division in all phases of defensive operations. This divisional battalion has the capability of helping to secure and preserve freedom of movement within the assigned sector and assisting to maintain the initiative for the entire division. This capability will be discussed by examining our concept of the defense and the missions and capabilities of this battalion. Then we will consider the influence this battalion exerts on the application of the fundamentals of the defense and conclude with a brief analysis of atomic considerations.

There has been an unfortunate tendency to overemphasize the static characteristics of the defense. Our concept of the defense visualizes its adoption either to economize forces in consonance with the principles of war of mass, economy of force, and surprise, or to gain time pending more favorable developments in consonance with the principles of war of the offensive, mass, and security.

Essentially, there are two types of defense. The position defense visualizes the bulk of the forces being disposed in organized tactical localities and able to control the terrain defended while an adequate reserve is withheld for a counterattack. On the other hand, the mobile defense contemplates the bulk of the forces being retained as a mobile striking force while the minimum required force occupies a forward defensive area. Once adopted the defense must *not* be characterized by a negative attitude that the defender has sacrificed all initiative to the attacker and is figuratively hanging on the ropes, pathetically waiting to be struck again, wherever and whenever the attacker pleases.

### Combat versus Technical Missions

Army Regulations 10-260, *Organization and Functions, Corps of Engineers*, gives the Corps of Engineers a dual status as

***A most important and responsible role in the defense is performed by the divisional engineer combat battalion whose flexibility and versatility ensures its profitable use on a broad variety of essential tasks***

an arm and a technical service. On the technical side the Corps of Engineers is charged with construction, supply, maintenance, and other specialized duties affecting all arms and it has representatives on the staffs of all major commands in a theater. There are a wide variety of engineer troop units, many of them combat units. In the direct support of combat operations, the Corps of Engineers has the missions of construction or destruction to facilitate the offensive effort, increase the defensive strength, and generally advance the over-all combat effectiveness of field forces. They may even be employed as infantry when the situation dictates. A word of caution should be noted here that the use of engineer troops in an infantry role should be a temporary measure and resorted to only in emergencies. Within the division the engineer combat battalion is equipped and trained to increase the division's combat efficiency and effectiveness by general engineer work and combat power.

Although much has been said about the delineation between technical and tactical (combat) missions, at the division level the separation between these two missions of the combat engineers is largely academic. For example, with the possible exception of functioning perhaps in an infantry role such as participating in a counterattack or occupying a blocking position, all activities of the engineers are technical to a degree because they utilize specialized equipment, supplies, and techniques. Nevertheless, the execution of technical tasks such as the preparation and execution of demolitions, erection of tactical bridging, emergency repairs to existing structures or facilities, and the installation of mines and other obstacles may take on a tactical aspect because of enemy fire and interference. Hence the capability for operating in a combat role must exist.

### Personnel and Organization

The division engineer acts in a dual capacity as the commander of the engineer battalion and as a member of the division special staff. If properly utilized within the division, the division engineer can contribute greatly to the commanding general's planning guidance, preparation of accurate staff estimates, the commander's estimate and concept of operation, and the preparation of the operation and administrative orders by the division general staff.

The divisional engineer combat battalion consists of 38 officers, 4 warrant officers, and 801 enlisted men and is organized into a battalion headquarters, headquarters and service company, four identical combat companies, and a medical detachment. The battalion is self-contained both operationally and administratively. The two special-purpose platoons of the headquarters and service company are of primary interest. The equipment platoon contains construction equipment and operators to supplement the combat companies while the bridge platoon contains bridging for short-gap bridges and a very limited amount of floating equipage.

The missions of the combat engineer

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battalion may be generally divided into two broad tasks: to facilitate and assist friendly movement and to impede and obstruct the enemy's movement. Both of these tasks have deep significance in the planning for and conduct of defensive operations. This unit can provide increased mobility for the elements of the division under all conditions imposed by the weather, terrain, and enemy.

### Missions Resulting in Mobility

The factors that contribute to the increased mobility of the division are intelligence, construction power, passage of obstacles, technical assistance, and combat ability.

Engineer and terrain intelligence are produced for the commander's planning and operational needs. The systematic presentation of terrain intelligence prepared by the engineers is known as a terrain study and constitutes the backbone of the G2's tactical study of the weather and terrain. For all terrain information and intelligence of the local area the commanding general should turn to the division engineer who, by thorough engineer reconnaissance, should be able to furnish such details as soil trafficability, relief and drainage systems, vegetation, water supply sources, manmade changes to the natural topography to include roads, fords, culverts, ferries, railroads, landing strips or airfields, pipelines, bridges, tunnels, towns, industrial areas, fortifications, natural or artificial obstacles of all kinds, utilities, local facilities, industries, and engineer supplies.

Relatively simple types of construction, repair, and maintenance are within the capabilities of this combat battalion. The division engineer must prepare sound recommendations for the location and/or repair or construction of necessary facilities, if any of the applicable manmade items are nonexistent or nonoperative. These recommendations or estimates will include the pertinent details of materials, equipment, time, and labor required for probable engineer operations to include normal maintenance of existing features. The work accomplished by this unit permits the division to negotiate areas otherwise impassable and generally facilitates rapid, reliable movement. The routes of communications must be kept open so that the mobility of armor and movement of artillery and infantry units is not hindered. The battalion also plays a major role in area damage control activities.

The construction power of the combat engineers was well demonstrated in World War II by the assault on the semicircle of forts held by the Germans west of Metz. The Moselle River separated the opposing forces on the north and the Seille River separated them on the south. On 8 November 1944 General Patton's Third Army attacked despite the highest flood waters in 80 years.

All bridges across the Moselle and Seille Rivers had been destroyed and the Germans had extensively damaged the road network surrounding Metz. Shortly before the attack the flood increased the width of the Moselle from a few hundred yards to almost a mile. Although plans for overcoming this river obstacle were enormously complicated by this sudden increase in width, the attack was not delayed. As the XII Corps made the crossing of the Seille and drove for the Saar, the XX Corps crossed the raging Moselle and encircled and reduced Metz. The division engineer combat battalions of the 5th, 90th, and 95th Infantry Divisions (the 7th, 315th, and 320th respectively) assisted by other engineer units performed many outstanding engineering tasks such as assault rafting under enemy fire, bridge building, and road repairing. This construction power increased the mobility of these divisions and was an important factor in the surrender of Metz on 21 November.

The divisional engineer combat battalion can remove obstacles to ensure the passage of friendly troops. During World War II, in the conquest of mountainous Sicily, the combat engineers overcame difficult terrain obstacles to permit friendly movement which greatly facilitated the rapid success of that campaign.

One of the outstanding examples of combat engineer assistance was performed in the breaching of formidable obstacles on Okinawa. On that island extensive employment of division engineers in assault tactics assisted in reducing the Japanese fortifications. During a 3-week period, the 77th Infantry Division's combat engineers destroyed 925 defensive works with an average daily expenditure of almost 2 tons of explosives. Despite small arms, mortar, and artillery fire these combat engineers fought beside the infantry throughout to perform their task of reducing the Japanese defenses.

Technical assistance provided to other divisional troops also assists the mobility of the division. This technical assistance and advice may include the tasks of the construction of specialized defensive installations, passage or installation of obstacles, laying of minefields under certain conditions, and denial activities. The combat engineers can assist in the training of these units in the performance of engineer type missions. Training nonengineer personnel to make rapid calculations of bridge capacities is another service the combat engineers can perform.

The divisional engineer battalion is armed with many and varied weapons to resist enemy interference while conducting regular engineer tasks which normally preclude the necessity for assigning infantry protection. This battalion's ability to function in an infantry role gives the division commander an ace in the hole as many historical examples illustrate.

During July 1944 in Normandy, the 90th Infantry Division's 315th Engineer Combat Battalion served as infantry in the heavy fighting for the Foret de Mont Castre and in this emergency infantry role they helped repel several fanatical German counterattacks. Later, in the desperate Battle of the Bulge, the 99th Infantry Division's 324th Engineer Combat Battalion fought continuously as infantry for an extended period to help stop the German counteroffensive.

The combat engineers have the necessary communications, mobility, and firepower to handle small-scale rear area security problems such as a small enemy airdrop or the outbreak of organized guerrilla activity in the divisional rear area. Likewise, in an extreme emergency the combat engineers can be used for flank security, to block an enemy penetration, or to relieve an infantry unit so that it may be used in another mission.

### Missions Impeding the Enemy

The missions and capabilities of the divisional engineer battalion which aid in impeding the progress of the enemy and add materially to the retention of the initiative in the defense are intelligence, denial activities, obstacle construction, camouflage, combat ability, and technical assistance.

The production of engineer and terrain intelligence together with the accompanying engineer reconnaissance may assist the commander in making the decision as to the best method of hindering the enemy's advance. There is also much engineer intelligence available from higher headquarters in the form of reports, studies, and evaluations of matériel and terrain that will be of assistance in the conduct of the defense.

Denial activities may vary in scope from demolishing a bridge over an unfordable river to the destruction of strategic, industrial, and military facilities on a theater-wide scale. Although instructions on denial activities are based on the

theater denial policy, at the division level all pertinent portions of such instructions are integrated with the barrier plan and appear in the barrier annex to the operations order. Some of these denial activities performed by the divisional engineer battalion may be of immediate value to the division, while other denial activities may have no direct influence on the division's operations except for the division effort spent in their execution. Because of its economy, rapidity, and reliability, demolition activity of all types figures very prominently in the creation of obstacles by destruction. Examples of these denial activities are the destruction of bridges, tunnels, roads, railroads, airfields, dams, equipment, supplies, facilities, and installations.

The construction of barriers results in economy of force and increased combat effectiveness for the division. Barriers effectively provide a readily obtainable means of delaying the advance of enemy forces to the front or flanks and limiting enemy envelopments or penetrations. Obstacles normally within the construction capabilities of the division engineer battalion are: minefields (antipersonnel and/or antitank); boobytraps and "dirty-trick" devices; barbed wire entanglements of all types; log obstacles such as abatis, cribs, hurdles, and posts; craters or antitank ditches; steel obstacles of all types such as steel beams, hedgehogs, and tetrahedra; obstacles to air-landed or airborne troops such as filled oil drums, vehicles, emplaced posts; and all types of beach and riverline obstacles. Of course, any available matériel may be converted into an obstacle; for example, the turning over of several vehicles on a road and boobytrapping and mining the area create difficulties for the enemy. The improvement of natural obstacles, such as cutting streambanks or flooding lowlands, pays big dividends in reduced expenditure of labor, equipment, materials, and time. If the weather is cold enough, water poured on slopes and roads reduces the trafficability of armor and vehicles. Demolitions can be used to effectively block narrow passages.

In short, use of effective obstacles is limited only by the ingenuity of the individuals concerned; however, the basic premise in obstacle construction is to maximize the use of natural obstacles. Naturally, the effectiveness of all obstacles is greatly increased when they are covered by observation and fire and are properly camouflaged; this may result in more surprise, delay, disruption, and confusion of the enemy.

The use of camouflage in the defense assumes increased importance. There is a significant relationship between camouflage and the successful accomplishment of the tactical mission because camouflage is one of the principal methods used to achieve combat deception and surprise. Camouflage may delay the enemy's advance by forcing him to exercise caution and making him suspicious of all defiles, blind curves, and other appropriate terrain features. In addition to the actual construction of camouflage by the engineer battalion, another important combat engineer responsibility is the supervision of camouflage activities of other units to include construction, technical assistance, inspection, and supply.

Although the use of the division engineer battalion in an infantry role would assist in hampering the advance of the enemy, the decision to utilize this unit should be carefully weighed.

Its employment in nonengineer tasks will result in decreasing mobility and an attenuation of logistic support for if engineer casualties are heavy, trained replacements must be immediately available or the degree of engineer support available to the division will be accordingly reduced. Moreover, if the entire battalion is committed in an infantry role, not only

does engineer support cease during that time but also a period of rehabilitation is required before the battalion can again perform its organic tasks. It is interesting to note that on 9 February 1942 in the Philippines, General MacArthur issued a directive to all corps and division commanders on the proper use of engineer troops. This ended the widespread practice of using engineer troops as infantry in outpost sorties and of sending them to clear fields of fire in front of division outpost lines with no covering force.

The division engineer battalion has a capability of providing technical assistance and supervision to all division units, attached and supporting troops, or even civilian labor in the execution of denial activities, obstacle construction, and camouflage missions.

### Proper Utilization of Terrain

In order to retain freedom of movement and the initiative and to ensure successful accomplishment of the defensive mission, it is essential that the defender maximize his use of the most advantageous terrain to compensate for inferiority in combat power. The best utilization of the terrain calls for complete terrain and weather analyses and their expeditious use so that the defender's combat power and his ability to accomplish the mission will be enhanced. The division engineer has the organization, technical background, and means to cover the division sector completely and quickly, secure the information, and analyze it for use by the commander and staff. While the information for use in analyzing the terrain is being gathered and compiled, he is simultaneously completing his preliminary planning for the vital barrier plan.

Proper utilization of terrain is a predominant consideration in the application of all other fundamentals of defensive action. Thus terrain figures prominently in the composition, location, and employment of security forces; in the type of defense used; in the organization of the defense; and in the conduct of the defense with emphasis on the counterattack. Therefore, terrain properly analyzed and effectively used by the defender assists in the accomplishment of the defensive mission and the combat engineer makes a vital contribution to this successful analysis and use.

### Security

Proper application of the fundamental of security reduces the attacker's inherent advantage of initiative as to the time, place, direction, strength, and composition of his attack. The main security force provided by the division is the general outpost whose missions are warning, harassment, delay, and deception. Combat engineers as a part of the general outpost contribute toward its successful operation by properly coordinating or placing obstacles to form barriers. The combat engineers also enhance the mobility of the general outpost by permitting its passage over obstacles and by facilitating its return behind the battle position. For example, if the main line of resistance (MLR) were located along an unfordable river and the bridges across this river were destroyed by enemy action while the general outpost was still in front of the MLR, the general outpost would depend on the combat engineers to provide passage over this obstacle. In a similar manner, although to lesser degree, the divisional engineers assist the combat outpost and local security elements.

### Mutual Support

Mutual support is an exchange of assistance between organized tactical localities and is obtained by fire, movement, or both. This support is desirable in the defense to prevent or to eliminate any penetration into the battle position, whether it be by a few infiltrators, patrols, or a

force large enough to defeat the defender in detail by attacking defensive localities one at a time. If mutual support is absent, each defensive locality must be strong enough to withstand the estimated enemy attack or it must withdraw. The defender's initiative is curtailed if this support is lacking because the enemy has freedom of movement between defensive localities.

### All-Around Defense

The combat engineers contribute to this mutual support by increasing the effectiveness of the command's available fires. The combat engineer battalion may construct or supervise the construction of obstacles or even occupy prepared defensive positions in emergencies. They also increase the capability of the several elements of the command to move, thereby improving the organization's mutual support.

While the defense is primarily oriented to cover the most probable enemy avenues of approach, it must also prevent the enemy from taking the position by surprise from an unexpected direction. From a division viewpoint, adequate rear area security, proper utilization of the terrain, defense in depth, and the coordinated barrier plan contribute to all-around defense. The combat engineers have the planning and supervisory responsibility for the barrier plan. The basic pattern of the barrier system is cellular so that an attack from any direction can be contained by a portion of the system. The ability to move troops into prepared positions is essential to all-around defense. While accomplishing their assigned missions, combat engineers are usually located throughout the division area so that at least a company will normally be available for emergencies. In addition to other troops in the division rear area, a portion of the engineer battalion may be rapidly concentrated to meet any threat such as a large patrol, airborne activities, or guerrillas.

### Defense in Depth

The essence of defense in depth is the preparation of defensive positions oriented to control likely avenues of approach and to protect critical terrain, in which case the construction power of the divisional engineer combat battalion may be profitably used. Without defense in depth any enemy penetration may be exploited and result in free maneuver in sensitive rear areas. This enemy freedom of movement would reduce the defender's initiative because he would be forced to counter all such penetrations or risk failure of the defensive mission. The engineer battalion's capability of constructing obstacles to impede the enemy, reducing obstacles to increase mobility, and functioning in an infantry role when the need arises permits the division a greater defense in depth.

### Coordinated Fire Plan

This fundamental, coordinated fire plan contemplates the most efficient use of all organic and supporting weapons, including antitank fires and air, to accomplish the defensive mission by restricting the enemy's freedom of movement and by defeating his assault. The enemy is brought under fire as early as possible and is subjected to increasingly heavier fires as he approaches the battle position. If the enemy succeeds in penetrating the MLR, the defender has three broad courses of action: contain the penetration and destroy the attacker by fire; restore the battle position by a combination of fire and maneuver in a counterattack; or block further expansion of the penetration while a higher headquarters executes a counterattack. The coordinated fire plan figures prominently in all three options and the combat engineers assist in this plan by the fires of its organic weapons when applicable but primarily by ensuring the rapid, reliable movement of all units, especially the artillery. The combat engineers may

assist the artillery in preparing and camouflaging firing positions when required.

### Flexibility

The defender achieves flexibility by providing for rapid shifting of his forces and by retaining the maximum reserve for counteroffensive action at the decisive moment. Flexibility envisages adequate units committed in defensive localities in consonance with the other fundamentals of defense and adequate units available to the defender for application where and when his decisive counteroffensive occurs. The counterattack is the decisive element of the defense.

The divisional engineer combat battalion is inherently a flexible unit. It may execute a wide variety of technical tasks aimed at giving the defender the initiative by facilitating the rapid shifting of forces. In the Korean conflict the combat engineers developed a road network which enabled United Nations reserves to move rapidly for employment where desired. In May 1951 when the North Korean Communists broke through the east central front they were amazed to find themselves facing the United States 3d Division; only the day before the Communist forces had been in contact with the 3d Division over 100 miles away.

Moreover, in an emergency the engineer combat battalion can be employed effectively in an infantry role in any of the normal missions of the reserve. For example, in the first phase of the Korean conflict the army commander repeatedly used the division engineers and other engineer combat battalions as infantry. These combat engineers often filled gaps in our defensive lines. One engineer combat battalion with a tank company attached formed a task force to defend a 35,000-yard front between two divisions.

In another instance the unexpected assault of the Chinese Communists across the Yalu River in Korea drove the United Nations forces back. The 2d Division was one of the units which bore the brunt of the attack and the 2d Engineer Combat Battalion was committed as a part of the rear guard to hold the roads open for the withdrawal of the division artillery. This engineer combat battalion suffered over 50 percent casualties in this combat role, but permitted the withdrawal of the majority of the division.

The counterattack is the key to flexibility and a successful defense. It is executed at the decisive time and place on the initiative of the defender. To ensure rapid, successful execution, counterattack plans are meticulously prepared in advance and rehearsed by at least the key personnel. The counterattack force consists of a combined arms team. The counterattack must be launched while there is still a reasonable chance of success and the defender's resources must not be ineffectually dissipated by small-scale counterattacks which are not decisive. The counterattack must either restore the original position or trap or destroy the penetrating force.

Combat engineers normally support the counterattack and their flexibility is well illustrated by the following brief extracts from the three Presidential Unit Citations awarded the 1st Engineer Combat Battalion during World War II:

*1st Engineer Combat Battalion was assigned the difficult missions of reconnoitering and seizing areas from which an attack could be launched on Gafsa, Tunisia . . . the battalion encountered demolished bridges, road blocks, and giant craters, all heavily mined and booby-trapped, and working parties were continually strafed . . . and attacked by enemy tank and infantry formations . . . pushed 35 miles beyond our outposts and seized vital assembly areas. The only Allied troops in this stretch of no man's land, the battalion covered the forward movement . . . protected the detrucking and*

*assembly areas, and cleared mines ahead of the assault troops. . . . During the Tunisian Campaign . . . speedily reconnoitered and constructed roads and bypasses under intense enemy artillery and small-arms fire . . . on several occasions the 1st Engineer Combat Battalion was used as a combat team when the infantry had been committed and no reserves were available; on 6 June 1944 . . . working at times ahead of the infantry, the engineers cleared a beach exit . . . at times engaging enemy infantry . . . obtaining valuable information concerning enemy installations. Minefields and barbed wire were installed under fire in front of our infantry defensive positions inland.*

### Coordinated Barrier Plan

The coordinated barrier plan complements the other seven fundamentals of the defense and is that annex to the operations plan which deals with the employment of obstacles to deny, delay, canalize, or stop the enemy. Although G3 has general staff responsibility for barrier planning, the unit engineer has primary special staff responsibility for this function. Combat engineers construct barriers which have not been assigned to any other unit or which require special skill or equipment and they also furnish technical advice, supervision, and assistance to other units assigned construction responsibility for portions of the barrier system. Tactical employment of barriers must be closely coordinated and integrated into the scheme of maneuver, including counterattack plans, fire support plan, and antitank plans.

An understanding of the barrier plan must, of necessity, commence with its smallest, independent component, the obstacle. A coordinated series of obstacles designed or employed to canalize, direct, restrict, delay, or stop the enemy and assist in imposing additional losses upon him is called a barrier. A series of related barriers in depth form the barrier system described in the barrier plan. The completed barrier plan normally consists of a trace of the lines of barriers and assigns specific tasks to units, priorities of construction, allocation of materials, completion times, demolition orders, gaps and lanes, and other coordinating details and reports required.

The combat engineer must carefully consider the following factors to produce a logical, efficient barrier plan: mission of the command; military aspects of the terrain with emphasis on natural obstacles and avenues of approach; weather; enemy and own capabilities including composition, strength, dispositions, peculiarities, and weaknesses; specific instructions or limitations from higher headquarters such as denial plans; and materials, labor, equipment, and time available. The fact that the engineer battalion is the fountainhead of terrain information within the division materially emphasizes its responsibility in barrier planning and execution, for the defender must take every advantage of the terrain. The desired characteristics of natural obstacles for incorporation in a barrier system are: ease of conversion into a more effective obstacle with a minimum expenditure of effort, materials, and time; defilade from enemy observation; location where defensive observation and fire can prevent enemy breaching; and difficulty of bypassing. In the withdrawal south from the Yalu in the Korean conflict, the combat engineers destroyed bridges and culverts on all railroad lines and highways which assisted in giving X Corps the necessary time to evacuate by sea to rejoin the main forces farther south.

The logistical requirements of artificial obstacles are very high. For example, a barrier minefield with an initial density per linear yard of front of 3 antitank mines, 4 bounding antipersonnel mines, and 8 blast type antipersonnel mines

requires a minimum of 100 tons of matériel per 1,000 yards of front.

The barrier plan is extremely important to a successful defense, especially when the unit is defending on a wide front for it assists in the accomplishment of both purposes of defensive action—to economize forces or to gain time. If properly utilized, the combat engineer battalion can rapidly and effectively plan and execute the barrier plan.

### Nuclear Considerations

The preceding paragraphs have dealt with the influence of the divisional engineer combat battalion on the application of the fundamentals of the defense. The use of nuclear weapons has a profound influence on the manner of conducting the defense and in turn on the functions of the combat engineers. Use of prepositioned nuclear weapons will give the combat engineers a greatly increased demolition capability for they are trained in and are responsible for placing and firing this type of weapon. The tremendous destructive power of nuclear weapons dictates the greatest dispersion possible consistent with the mission; widest use of deceptive measures such as camouflage; maximum use of protective measures such as personnel shelters and field fortifications; and plans to minimize loss, disruption, and damage from nuclear weapons.

The defender's dispersion must be consistent with the successful accomplishment of the mission. The ideal form of the position defense will probably give way to extended forms of the position defense and to a much greater use of the mobile defense. These forms of defense count heavily on the mobility of the defender and this mobility is enhanced and augmented by the combat engineers with their construction power. Routes of communication must be kept open for use by all divisional units although the distances covered may materially increase.

Under conditions of dispersion the retention of the initiative becomes even more important and necessary. Denying the enemy access between dispersed defensive localities assumes an added prominence.

Deceptive measures taken against nuclear attack in an effort to retain the initiative consist of active and passive actions. Active deceptive measures comprise activities and movements to conceal the defender's capabilities and dispositions so that the enemy will be deceived. These measures include demonstrations, ruses, diversions, and feints. They are usually based on movements which in turn depend upon mobility. Camouflage is an excellent example of a passive deceptive measure for it contributes to concealment of the defender and increases the attacker's problems and difficulties of target selection and solving the details of the defense.

Adequate protection for personnel and equipment is necessary for survival in a nuclear conflict. Stress is placed on mobility and striking power of reserves and protection of individuals, units, installations, and signal communications. There may be a greater number of protective and defensive installations required as these will be necessary if the defending force is to survive, keep the initiative, and accomplish its mission. More time may be required to prepare adequate defensive positions under these nuclear conditions. The construction power of the combat engineers will greatly facilitate the accomplishment of the increased protective measures required. Also a considerably greater demand for locally available construction materials and tools together with combat engineer technical advice and supervision will ensue.

In the field of area damage control the construction power of the combat engineers is significant. Area damage control visualizes the resumption of normal activities as rapidly as possible after a

disaster and the combat engineers have the training, techniques, and equipment suited for rescue and rehabilitation work of all types. Their organization and communications are ideal to cover a large area and effectively work other labor or units. Area damage control operations include fire-fighting, rendering first aid, removing casualties, salvaging or evacuating damaged equipment and material, demolishing structures rendered dangerous and repair to all manmade features especially the routes of communication. In a defensive situation, where the enemy has utilized a nuclear weapon, the resumption of the initiative will probably be dependent on the accomplishment of a successful area damage control operation.

### Conclusion

In future conflicts the combat engineers' responsibility for preparation of obstacles, barriers, and the barrier plan will become more vital to the success of the defense. Also greater efficiency in the expenditure of material, labor, equipment, and time should be attained because of the greater areas involved. Supervision of the operations of attached or supporting combat engineers becomes more difficult because of the increased space factors. Additional small landing fields will probably be necessary to assist in the supply of dispersed defensive localities. Map coverage requirements are increased as are supply requirements such as water supply equipment and camouflage and fortification material. There may be a greater possibility of employment in an infantry role when defending on extended frontages but the use of combat engineers in an infantry role must be carefully considered because of possible diversion from other vital work and possible loss of critical specialists if the unit is involved in sustained combat. In short, if the initiative in the defense is to be retained, dispersion will result in added work and responsibilities for the combat engineers.

The flexibility and versatility of the divisional engineer combat battalion ensures its profitable use on a broad variety of essential tasks. As can be readily seen, a most important role in the defense is performed by the 843 divisional combat engineers who inserted the quickly answered advertisement, *WORK WANTED.*

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**Not only is the Army ready to fight the war wherever it occurs but it is prepared to fight it on the element where it will end. As long as men lead their lives on land, as long as they draw their strength from the earth—in short, as long as they are men—all wars will end on the land; and it is here that the Army, which is the military force designed to gain land objectives, finds its secular justification.**

**Whatever the destructive effect of firepower—and firepower may be in the form of bullets, shells, rockets, or bombs—whatever the effect of firepower there will always be the need for men on the ground to exploit the success of that firepower and to clinch the victory by occupying that portion of the earth's surface from which the enemy derives his strength to wage war.**

***General Maxwell D. Taylor***

# PERIPHERAL WARS

Brigadier General Paul M. Robinett, *United States Army, Retired*

*The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.*

THE term "peripheral warfare" can be regarded only as a catchword of very recent origin. So far as can be determined, journalists had used the term when Navy Captain John B. Hayes introduced it into professional military literature in an article entitled "Peripheral Strategy—Mahan's Doctrine Today" appearing in the *United States Naval Institute Proceedings* for November 1953. The article was changed slightly and then reprinted as "Peripheral Strategy . . . Littoral Tactics . . . Limited War," in the September 1954 issue of *Combat Forces Journal.*

The peripheral concept as enunciated by Captain Hayes is defensive, envisaging as it does the containment of an aggressive power. Specifically he envisages the containment of the Soviet Union within the Eurasian Continent, less certain portions in the south; being a Navy man, Hayes is attracted by the shoreline.

In his book, *The Day of the Saxon,* Homer Lea has written that:

*All national frontiers are subject to constant fluctuation and must be forever shrinking or expanding. They can no more remain delimited than can the coastline of oceans, for they are those indefinable shores where break the restless, turbulent seas of life.*

He goes on to explain that there are:

*. . . four degress of expansion—territorial, economic, political, and racial. These degrees of expansion are in turn dependent not alone upon the potentiality of the expanding state, but also upon the receptive condition of that country toward which its energies are turned.*

Lea gives his ideas of the outcome of a policy of containment as follows:

*Whenever one nation, in the extension of its sovereignty, is circumscribed and limited by another nation, and at the same time possesses equal or greater physical power, then the encompassing nation is destroyed, since a state of equal or greater military power occupying interior lines is as many times stronger as there are political segments in the circumscribed circle.*

*The elemental weakness of an encompassing nation is that, being territorially vaster, it acts on the defensive. This defense is not equal to, but is less strong than, the defense of the strongest part. The weakness is proportionate to the number of entities composing the empire and the degree of their segregation.*

*The military power of the encompassing nation must always exceed that of the nation encircled in that proportion which ensures the restriction of the theater of war to the territory of the encircled nation.*

*The subjugation of an encircled nation must be complete to result in victory to the encompassing nation. On the other hand, the defeat of a single segregated entity of the encompassing nation may result in the complete downfall of the whole.*

### The Roman Empire

The best historical example to illustrate Lea's theory is that of Rome. From the very foundation of Rome, almost until the time of its greatest growth, Roman policy was expansionist. It meddled in the af-

fairs of all contiguous nations and won them by political or forceful means, most often by conquest. Roman legions finally advanced as far as Scotland and the Elbe in the west, the Danube in central Europe, the Tigris in the east, and the Sahara in the south. Upon assuming the royal purple, Augustus soon changed the expansionist policy of Rome to that of defense, although some acquisitions were made after this policy was adopted, notably in Dacia. The Great Wall in England, the line of the Rhine, the Alps, the Danube, the Black Sea, the Tigris, and the Sahara Desert became the defensive perimeter of Rome. Incursions of barbarian peoples were successfully beaten back for many years; but finally the Roman people, debauched and changed by the introduction of alien stocks and weakened by internal strife, were overwhelmed by a flood of barbarians from beyond the borders.

### Nazi Germany

Nazi Germany furnishes a historical example of an expansionist state which lacked the force to execute its policy. Disarmed and surrounded by a hostile coalition, Hitler, nevertheless, launched upon an ambitious program of expansion, taking advantage of weaknesses existing in the opposing coalition and its armed forces. He first initiated rearmament, then occupied the Saarland, Austria, and much of Czechoslovakia. In collaboration with the Soviet Union he next destroyed Poland in a short campaign. This resort to force at last brought France and Great Britain to the realization that they must fight. But before they came to this decision, they had lost all their central European allies and their land forces had become obsolete. Germany next seized Denmark and Norway and defeated and occupied the Low Countries and much of France. Having cleared and occupied the Balkans, Germany attacked the Soviet Union. She lacked the force to succeed in this undertaking and was totally defeated under the impact of attacks from the west and east.

### The Soviet Union

The expansion of the Muscovite principality into the Soviet Union has followed the pattern of Rome. From the very beginning it has advanced its frontiers by intrigue, political trickery, subversion, economic pressure, and force.

Captain Alfred T. Mahan in his book, *Naval Strategy*, has said that:

*Militarily, Russia as a nation is not enterprising. She has an apathetic bias toward the defensive. She has not, as a matter of national or governmental decision, so grasped the idea of offense, nor, as a people, been so gripped by that idea, as to correct the natural propensity to defense, and to give defense and offense their proper adjustment in national and military policy.*

This is believed to be a naval man's idea of Soviet policy. From the point of view of the Soviet Union as a landpower, Mahan was mistaken.

The Soviet Union, taking advantage of internal weaknesses of neighbors in the west and the defenseless peoples in northern Asia, the impotence of China, and the isolation of Japan, extended her empire both to the west and to the east. She eventually completely upset the political and military situation on the Asian mainland in the northwest Pacific region.

***Containment, accompanied by little wars on the periphery of enemy-held or dominated territory, is only a tactic and not a form of warfare. It is a delaying action, therefore, which cannot win a decision***

The present rulers of the Soviet Union have inherited the records and the system of their predecessors. They have merely improved the disruptive techniques of older times without changing the purpose. The basic tenet of the Communist regime is unquestionably world domination.

During or subsequent to World War II the Soviet Union absorbed the Baltic States and parts of Finland, Poland, Czechoslovakia, and Romania, and the Kuril and Sakhalin Islands, reduced Poland, a part of Germany, Czechoslovakia, Hungary, Bulgaria, and Romania to dependencies, and made China into a satellite. This satellite is itself on the march and already controls vast additional territory.

In spite of Soviet expansion, however, there is a certain geographic weakness to be noted in the Communist world. It is like an unbalanced dumbbell with the larger and more important part of the dumbbell in eastern Europe and the smaller in the Far East. The two centers of power are connected by the tenuous line of the Trans-Siberian Railroad. All the advantages to be gained from a central position are, therefore, not possessed by the Communists for the center of power is not centered in their vast territory. The greatest danger is that the Far Eastern center of power may grow until it approximates that in the west. If this should come about and the two centers of power should work in complete harmony, the danger to the Western World would be infinitely greater than it is today.

### Japan

Japan, under the urging of the United States, reversed her isolationist policy in the late nineteenth century and after a short period of modernization adopted an aggressive policy of expansion. After defeating China and acquiring Korea she next defeated Russia and gained important concessions in Manchuria and Sakhalin. But Russia retained a hold on the Pacific while Japan was becoming a continental power.

Taking advantage of the situation in Europe during World War I, Japan acquired German concessions in China and penerated deeply into Russian Siberia only to withdraw when left to face increasing Communist resistance.

From the Mukden incident of 1931 Japan was drawn deeper and deeper into Asian affairs by Chinese noncooperation and open resistance. The Soviet Union, which had managed to maintain and hold a position on the Pacific, supported this resistance by all means short of open warfare.

When Japan became overextended and tied down by the war in China, the Soviet Union initiated a series of border incidents after 1935 in which she sought to tie Japan down further and to secure intelligence and strategic points on the frontier. Later, when the Soviet Union became involved in a war with Germany in 1941, a neutrality pact was signed by the Soviet Union and Japan and the border incidents ceased for a time. Some of the earlier incidents, notably the one at Nomonhan (May to September 1939), were small wars involving troops of all arms.

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In that affair the Soviets used five infantry divisions and five or six tank brigades supported by air. The battle continued for about 2 months.

The border incidents were resumed when the war against Germany took a favorable turn in the west and after the Soviet forces in the Far East had been greatly strengthened. These incidents were increased before the Soviets renounced the neutrality pact and attacked Japan in August 1945.

### Great Britain

The record of Great Britain has always intrigued navy men for the position of that great nation was built largely on the success of its ships. After a prolonged but unsuccessful dynastic attempt to win France, the English followed a balance of power policy in the affairs of Europe while extending their empire around the globe by seizing key geographical localities and by occupying vast and weakly occupied or governed territories. With those advantages Great Britain eventually controlled much of the overseas trade of the world and in time developed a powerful industrialization to support it.

Military operations in support of the rising empire were based upon a navy capable of exercising undisputed control of the seas and a skilled, highly disciplined regular army, supported overseas by territorial militia. This policy was highly effective at a time when communications were poor and much of the world was inhabited by peoples in a low state of political development, unfired by dynamic ideologies, deficient or devoid of industrialization, and lacking up-to-date armed forces. As an indication of the magnitude of her land operations during this expansion, it is interesting to note that until the time of World War I no British general, except Wellington at Waterloo, had commanded more than approximately 60,000 British troops in actual battle.

The British Empire reached its zenith during the reign of Victoria. Since then the British have been drawn into two great wars in support of their balance of power policy. Although surviving these wars the foundations of the Empire were seriously weakened.

### Conclusions

As Clausewitz has said "war is but a continuation of policy by force." Policy, therefore, determines the extent and place force is to be used and where resistance will have to be made. A nation's long-range policy is thus more difficult to detect than the forces which are prepared to back it up. This is true because in a totalitarian state, policy can be concealed within the minds of a very few men at the top, whereas, the actual troops and weapons are hard to conceal for any great length of time. When policy is openly stated, as in "unconditional surrender" at Casablanca, one nation at least has given away its hand in the game of world politics.

The shock of the great wars of the twentieth century upon mankind was indeed very severe. Improved communications and weapons, perfected during the first half of the century, made possible the centralization of power in a few men of the industrial nations. Dynamic ideologies were at hand for the use of unscrupulous leaders, and shattered economies, hunger and want, and lowered spiritual and eth ical standards provided a favorable seedbed for their propagation.

It can be concluded that containment, accompanied by little wars on the periphery of enemy-held or dominated territory, is only a tactic and not a form of warfare. It is a delaying action which cannot win a decision. Containment may postpone a decision until more favorable conditions prevail, but this is only one possibility, for delay may lead to a more unfavorable rather than favorable situation.

# Motivating "Ivan" Indoctrination in the Soviet Army

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*The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.*

THE Soviet citizen today is the target of Communist Party propaganda virtually from birth to death. At no time during his life is this political and cultural indoctrination more intense, or his responsiveness more closely observed, than during his service in the Soviet Army. The period of military service for "Ivan" begins sometime between his eighteenth and twentieth birthday and normally lasts 2 years. By the time Ivan enters service he has already been made psychologically amenable to a planned system of indoctrination and, if not entirely enthusiastic, he is at least emotionally neutral about military service.

By Government decree, compulsory attendance for 7 years at a primary school is required of all young people; this is usually their initial contact with Party propaganda. In addition, there are local and regional branches of Communist Party auxiliary organizations such as *Komsomol*, *Young Pioneers*, and *Little Octobrists*, in which membership is almost a *sine qua non* for later advancement in the industrial, military, or political hierarchy. Membership is also available to those youths 15 years old or older in voluntary societies for assistance to the armed forces, like *Dosarm*, *Dosflot*, and *Dosav*, under sponsorship of the Army, Navy, and Air Force, which provide preinduction training in military skills for the Soviet population. It is through these schools and auxiliary Party organizations that the child and adolescent is mentally conditioned for the operations of the political officer. During this preservice period the stress is always laid on the propaganda themes of patriotism and Party loyalty.

### Ivan's Characteristics

What is this composite of physical and psychological characteristics that forms the personality and influences the behavior of the Soviet soldier, cynosure of the army propagandists?

Because of the cultural and economic heterogeneity of the Soviet population, valid generalizations concerning the Soviet soldier are difficult to make. However, some descriptives can be applied to the bulk of Soviet soldiers who are of peasant origin. The soldier, whether he belongs to the Great Russian, Byelorussian, Ukrainian, or smaller ethnic groups, has always been involved in strenuous manual labor under difficult climatic or geographical conditions. His physique is strong and he has a tremendous capacity for enduring extreme hardships for prolonged periods with almost complete indifference.

A long history of serfdom under autocratic rulers and the inculcation of absolute obedience to authority, whose edicts

tended by excessive taxation to further depress an already low standard of living, created in the peasant an instinctive evasiveness and hostility toward imperial rule and its representatives.

Successive invasions of Russian territory by outside forces from Western and Central Europe and Asia developed in the peasant a clannish suspicion toward the foreigner and a deeply ingrained love of his native soil. This ambivalence of emotion is fostered by government policy and nurtured by the state propaganda apparatus.

That the Soviet citizen and soldier is capable of displaying great personal courage and contempt of death when properly motivated is proved by his behavior in wars of the past and especially in World War II. This stoical attitude toward death is a result of the Russo-Asian's low estimate of the value of an individual in the mass and his phlegmatic acceptance of the necessity for human sacrifice in the attainment of an objective.

### Political Officer System

The pre-1917 Russian Army, built as it was on the feudal system and reflecting the serfdom of imperial Russia in its officer-soldier relationships, contained within it the germs of its eventual putrefaction.

Following the Revolution of March 1917, Order Number 1 was published in the heat of reaction against the abuses of the officer corps of the Imperial Russian Army. In publishing this order the Provisional Government sought to eliminate the discontent remaining from the Imperial Army system by giving the soldiers some measure of self-government and abolishing certain forms of address and conditions under which saluting was required. At the same time professional propagandists of the Bolshevik Party infiltrated frontline units, especially the infantry, contrary to the orders of the Provisional Government. These Bolshevik propagandists were busy sabotaging the efforts of Gutchkoff, Minister of War, to reconstitute the morale and will to fight of the Russian Army in preparation for the spring offensive which the Provisional Government had promised the allies. The slackness of discipline, accelerated by the issuance of Order Number 1, the propaganda operations of the Bolshevik political commissars which used the appealing peasant theme of "Peace, Bread, and Land" and continually discredited all civil and military promulgations of the Provisional Government, combined to demoralize the Russian forces. In November the Bolshevik Party under Lenin's direction seized the machinery of government.

Trotsky, Commissar for War in the Lenin government, immediately took steps to rehabilitate the Red Army militarily and to "Bolshevize" it politically. His most pressing problem was obtaining experienced commanders who were politically reliable.

The decision was then made to employ loyal Communists as political commissars in each unit and retain former czarist officers as commanders. The latter were to be replaced as soon as possible by indoctrinated graduates of Communist military officer schools. All actions of the czarist officers were under the close scrutiny of the political commissar who became the Party's eyes and ears in the ranks.

During the civil war which followed

***The future success or failure in maintaining Ivan's loyalty to the Communist regime will depend greatly on the psychological warfare efforts of the opponents of the Soviet Union in the ideological "cold war"***

Lenin's accession to power, the political commissars (politcoms) were given what was tantamount to absolute military control. Not only was the politcom to ensure full enthusiasm on the part of the unit commander, but no order of the commander could be implemented without the countersignature of the politcom. The importance of the politcom in maintaining the cohesiveness and combat morale of the Red Army during the hardships of civil war was commented on by Lenin.

### Divided Command

Now the Bolshevik regime entered on a long-range program of political and cultural indoctrination of the Red Army. The purpose of this program was to develop a disciplined, motivated force which would be efficient in combat and absolutely loyal to the Communist Party and hence the Bolshevik dictatorship.

The system of divided command between the military commander and the political commissar was a continual source of friction. The politcom who was looked upon as a Party spy was sole determinant of the military proficiency and political reliability of the unit commander. However, with the continued influx of politically indoctrinated officers from the various army schools and academies, the authority of the politcom was gradually curtailed. By the midtwenties the countersignatory powers of the politcom were almost abolished and unity of command established. In many units the military commander who was considered a loyal Party member had no politcom in his organization.

In 1935 a decree was issued which organized the political commissars into nine ranks to correspond with their echelon of assignment. At company level there were three grades of politruk (political director); the commissar was found at battalion, regiment, division, and corps levels, with two grades of commissar at army level. The position of politruk was open even to privates so that aggressive Party members of the lowest ranks could aspire to a degree of political power.

### Widespread Purges

In spite of the complicated and highly organized machinery of the commissar system, from time to time it became necessary for the Soviet Government to carry out widespread purges within the army of politically dissident elements. One such cleansing of the ranks occurred in 1927 when 16,000 officers were sent home on the pretext that a normal proportion of officer to enlisted strength had to be established. By 1937 most of the trappings and military distinctions of the Imperial Russian Army had returned and Revolutionary Order Number 1 was officially revoked. This was the year also of a purge which shook the Red Army to its roots and resulted in the elimination of thousands of officers including some of the best talent in the High Command.

As a result of this cataclysmic upheaval in the Red Army command and the concurrent spread of fear and suspicion throughout all echelons, discipline and combat morale ebbed dangerously. New decrees restored commissars to their position of dominance, countersignatures were again required on all orders, and a di-

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vided command principle was reimposed which gave the commissars and politruks equal status with the military commander. Now, regardless of how orthodox a Party member the commander might be, a commissar was attached to his unit.

In 1939 the Soviet Union went to war against Finland. Although the Red Army eventually achieved victory in this "contest," the fact was that its combat efficiency had proved to be less than mediocre. Marshal Voroshilov was replaced by Marshal Timoshenko, a noted disciplinarian, as Commissar of War and a new set of reforms instituted. During the Finnish Campaign political commissars had too often interfered with and obstructed the plans of the military commander. Timoshenko was authorized to eliminate the politcom's right of codetermination in military matters and reduce the entire army political organization considerably.

### Results of German Invasion

In 1941 Nazi forces invaded the Soviet Union and although the over-all army effort for a coordinated delaying action was at times skillfully executed, too many of the initial Soviet setbacks were due to the capitulation of large size units without even token resistance. As a result a reorganization of the entire political commissar system was carried out in October 1942. Politruk and commissar positions were abolished in all units and unity of command was established with the unit commander carrying responsibility for all military and political measures. This did not mean that the unit was free of the commissar's influence. Instead of the old commissar, a political officer (zampolit) recruited by competitive examination among army officers was introduced who occupied the position of deputy commander or chief of staff, from the battalion level up through army level. According to the New Rules of the Communist Party the chiefs of political administration at army level must be Party members of at least 5 years' standing, while those at division and brigade level must have a minimum of 3 years' Party membership.

These political officers were of course subordinate to the unit commander, but now had the added advantage of being in the military chain of command. The political officers still retained a special channel which bypassed commanders at all echelons and terminated in the Main Political Directorate at Defense Ministry General Staff level. As second in command the political officer was also qualified to take over command of the unit in the event the commander was lost and until a new commander was assigned. In Moscow the school course for political officers called for 780 hours of instruction to include 150 hours of political instruction, 220 hours of tactics, 182 hours on weapons, and the rest to various other military subjects.

Today the political officer's primary duty is the cultural and political indoctrination of troops. He is aided in this task by "cells" of loyal Communists distributed throughout each company or similar size unit. The system, it is clear to see, provides the Minister of Defense with a 2-way apparatus which disseminates Party propaganda to all levels of command and also returns information concerning the state of discipline, morale, loyalty, and similar intangibles that make up combat efficiency.

### Techniques of Operation

In peacetime the political officers of the Soviet Army are involved in the herculean task of turning thousands of recruits into loyal adherents of Communist Party rule and rigidly disciplined soldiers, mentally conditioned for combat. During war the political officer must concentrate his efforts on the maintenance of combat morale and enthusiasm of the rank and file for the military operations of the unit. Motivation of the soldier is accomplished by a program of agitation in which the content is based mainly on emo-

tional appeal, since the peasant or city worker, with relatively little educational background, is poorly equipped to respond to any intellectual appeals.

The political officer or zampolit carries out his propaganda and educational program in the peacetime army during a split or combined 2-hour daily political session. The morning session covers reading and interpretation of articles in various civil and military publications and the evening session is used for lectures on political theory, doctrine, and events. Obviously the one zampolit at battalion level would be hard pressed to carry this program effectively by himself. For assistance in the implementation of the program the zampolit relies on the Party cells. In any military unit, regardless of size, as soon as at least three Party or *Komsomol* members are present a cell labeled either *Partorg* or *Komsorg*, depending on the source of membership, is formed. The cell chief, operating under supervision of the zampolit, induces the best of the non-Party men to apply for candidacy membership in the Communist Party. These cells receive their political indoctrination at regimental seminars and divisional schools.

The Main Political Directorate at General Staff level maintains and supervises an army-wide net of libraries, reading rooms, recreation halls, theaters, and other facilities for the smooth functioning of the propaganda machine. The cultural and recreational activities of unit personnel are carefully supervised so that Party propaganda permeates these extra-military activities as well.

At battalion level copies of *Pravda*, *Izvestia*, and *Krasnaya Zvezda* (Red Star) and the army or army group newspapers are received daily. Each division publishes a newspaper at least once a week and orders of the day are mimeographed and distributed and then discussed at the political training session. Divisions publish pamphlets and posters with explanatory comments covering a variety of political and ideological subjects. Libraries are found sometimes even at company level.

A powerful propaganda weapon is the film which, following the present Soviet policy of fostering a patriotism of nationalistic bias, is devoted to historical themes centering on the heroic accomplishments of the army and its past leaders. Many of these are produced in Soviet Army studios. Motion picture showings are carried out by the division mobile film unit. At division level the political officer also supervises the unit club which through its cultural group arranges concerts, amateur and professional theatricals, and dances and visits by ballet troupes. In Moscow the Soviet Army personnel have available a number of clubs and the Central Theater of the Soviet Army. These are duplicated, less ornately, in the other large Soviet cities and in military areas.

### Political Officer's Technique

The political officer's technique of operation during combat is based on an emotional appeal, using various underlying themes, intended to spur the soldier to enthusiasm in the attack. To carry such a program effectively it is necessary that the political officer, by personal example, demonstrate that he possesses those military virtues and qualities which are the subjects of his daily agitation. A few examples used by the political officer's technique during combat in World War II will illustrate the emotional context in which a basic theme is used.

#### *Vengeance*

In a frontline regimental shelter the politcom starts a general discussion and then shifts his conversation to describing how well off the soldiers were before the Nazis destroyed everything. Various Party members in the group substantiate

this with examples from their past experience. The politcom, using statements in printed materials and photographs, heatedly recounts the atrocities committed by the Nazis and exhorts his listeners to revenge this bestiality. Eyewitness accounts by Red partisans also help.

A well-known and well-liked soldier is killed in battle. The company politcom collects some money and sends it with a letter of condolence to the soldier's widow. When he receives the widow's reply (this can be faked) he reads its contents to the assembled company. The letter purportedly thanks the soldiers for the contribution and in an extremely lachrymose style, with fervent patriotic appeals, begs the soldiers to avenge the death of their comrade.

### *Pride*

A regiment is moving into the line for a major offensive. In the assembly area the political officer, talking over a loudspeaker, informs the troops of the glorious accomplishments of flank units and other army divisions. The enemy is reported fleeing in panic before the courageous Red Army. The honor of the entire regiment is in the hands of the soldiers. They must emulate by personal deed and courage the successes of heroes in adjoining units and gain those coveted awards and decorations. Those soldiers distinguishing themselves in the coming battle receive extensive publicity in their hometowns and villages.

A company is temporarily withdrawn for rest and to receive replacements. The area is carefully policed and the soldiers checked for neatness and military appearance. The replacements are met by the politcom and a number of the best soldiers, fully bemedaled. The replacements are welcomed at a very elaborate meal during which the politcom and the decorated soldiers make speeches about the combat accomplishments of the company, the distinguished and capable company commander, and the high caliber of their noncommissioned personnel.

### *Fear*

A rifle company attacks and takes a village stubbornly defended by the enemy; a counterattack is expected. The politcom, together with some experienced soldiers, describes various incidents where soldiers who deserted their positions during a counterattack were killed by enemy fire, whereas the stubborn defenders beat off the counterattack with comparative personal safety.

Before going into the attack the company politcom arranges for the placing of Party members at the front and rear of each platoon. Combat-experienced soldiers who have been decorated for valor are interspersed among the new and inexperienced soldiers. The purpose of this scheme of distribution is to prevent individual soldiers from straggling and faltering in the attack when subjected to enemy fire. Those soldiers who lag or fail to display sufficient aggressiveness are shot. The incident is not suppressed, but on the contrary, steps are taken to ensure word-of-mouth circulation of this information throughout the unit.

## Conclusions

Considering the cultural and psychological makeup of the Soviet soldier, the Soviet Army's organization for indoctrination has been effective in developing a degree of loyalty to the Communist Party and the regime. However, without some material improvements the doctrinaire mouthings of the Party propagandist would eventually become meaningless platitudes. It must be remembered that although the average Soviet citizen is, by Western standards, poorly fed, clothed, and housed, Communist propaganda depicts the situation before the Communist dictatorship as immeasurably worse. The army youth who has no personal knowledge of prerevolutionary living conditions

is convinced that this improvement in standards is the result of the "dictatorship of the proletariat." The Soviet soldier finds that in the army his daily material needs are supplied in far greater abundance than is possible in the meager economy of civilian life. So the army political officer generally works in a favorable psychological environment.

The Revolution produced changes in the army structure which resulted in the formation of a strong psychological base on which to build combat morale, a base which did not exist in the Imperial Russian Army. The elements of this psychological base are: first, the lack of difference in social origin of the officer class. The czarist officer, as far as the soldier was concerned, came from a foreign and unknown world. In the Soviet Army today, despite a castelike differentiation of ranks which is developing an increasing rigidity, the officer and soldier are products of common social levels.

Second, although discipline is stricter now than it ever was in the pre-Soviet Army, it derives from respect for the officer's greater knowledge, training, and capabilities as a leader. By comparison the czarist officer had nothing more than some fundamental military training, an origin in the upper strata of society, and a total disregard for the welfare of the soldier.

Third, the political officer uses to full advantage the peasants' long history of *Sobornost* or congregationalism in the indoctrination of the soldier. This religious tenet, that no individual right exists nor can one's destiny be fulfilled outside the group, is fully exploited with the addition of a Marxian political patina. The soldier is made to understand that his effort, his opinion, and his desires must coincide with the group effort, the group opinion, and the group desires, and thus he will share in the glories and successes which accrue to his unit and the Motherland.

During World War II the political officer worked in an atmosphere which developed out of a life and death struggle for defense of the homeland. How effective his work would be if the Soviet Army were called upon to fight a war of aggression is entirely conjectural. The fact is, however, that the difference between the future success or failure of this "new arm" of the Soviets in maintaining Ivan's loyalty to the Communist regime will depend to a great extent on the psychological warfare efforts, qualitative and quantitative, of the opponents of the Soviet Union in the ideological "cold war."

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**The all-important mission of the Army is to uphold the interests of the United States in peace, in cold war, or in a shooting war. This means that the Army must be mobile and flexible—prepared to move on short notice by land, sea, and air to fight any enemy, any time, any place. Paramount in peace or in cold war is its mission to deter aggression—to prevent war by being thoroughly prepared for it. If the Army is to be an effective instrument of deterrence, the evidence of its ability to fight—and to win—must be so convincing that any potential enemy knows in advance that aggression on his part would not pay.**

*Secretary of the Army Wilber M. Brucker*

# THE COMPANY OF VON STEUBEN AND LAFAYETTE

Gluecksritter *

*The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.*

DURING the course of our military history, United States Army officers rarely have served as advisors with foreign armies. It is true that soldiers of fortune and a crew of mountebank adventurers have sold their services in legitimate as well as desperate enterprises, but until recent years the United States has been more frequently the recipient of allied aid and advice—from the Revolutionary War through World War II, this country has profited from the generous services of French, German, Polish, and English officers. Today, by virtue of our position as one of the major world powers, we are returning these past debts with interest. This participation is of direct personal concern to many officers for with every publication of special orders, assignments to military assistance advisory groups (MAAG) are listed. At the present time there are over 25 MAAGs alone; from Norway to Spain, from Italy to Iran, from Japan to Thailand, military personnel are functioning as members of the United States "Country Teams." The largest number of officers involved are assigned to MAAG, but they also serve in the joint missions and military assistance divisions. In size these groups range from 1,000 officers and men to small detachments. Therefore, it may be anticipated that during the course of a few years a large percentage of the officer corps will have served in some capacity as a member of an advisory group.

* The author prefers to use a pen name.

### Primary Concern

More important than this possible personal involvement is the contribution of the advisory teams to the implementation of the Mutual Security Program. The Mutual Defense Assistance Act of 1949 emphasized the role of military, economic, and technical assistance in contributing to the "mutual security and individual and collective defenses of the free world" and in the development of the resources of the free world "in the interest of their security and independence." Such aims are consistent with the security and defense of the United States against the relentless pressure of international communism—in this conflict ideas and people are as important as money and weapons.

The primary concern of the professional soldier is, of course, the development of the military resources. When he looks

***What men think and believe are as important as the weapons they hold in their hands. As official representatives, all MAAG members must ensure that the mutual aid program is as the phrase implies—mutual***

at a map of the world, studies the population data, and compares the natural and technical resources of the great powers, he is inclined to accept the thesis that the United States will need large numbers of allied ground troops in the event of a major conflict. Furthermore, when he reviews the events of the past few years he also accepts the necessity of friendly countries possessing the internal economic and military security that will block the insidious ground fires that edge through the undergrowth and secret passages.

The *mutual* aid program is as the phrase implies—*mutual*. The other free nations are not lacking in pride, dignity, and self-respect; they are not prepared to embrace the policy of supine dependency —that would reduce them to a colonial status. Thus the way in which the aid is extended is as important as the material objects—the funds, the machines, the weapons, and the ammunition. The most immediate and visible agencies of the United States military aid program are members of MAAG; they can do much to ensure that those who receive the aid will not feel like beggers receiving alms or poor relatives of rich city kin. Perhaps there are some who would criticize such consideration for the sensibilities of others on the grounds of expediency, of "realism," of "if they don't like it thay can lump it." This camp frequently includes those who loudly proclaim that the United States does not need allies, that her Air Force would ensure a quick victory through mass retaliation weapons. Only the folly of the ignorant and the naïveté of the provincial are capable of the boastful assumption that we can "go it alone" or that all future conflicts will be "atomic" wars. Today no nation is a self-sufficient and self-contained island wrapped in the security of its geographical isolation and fortified by the wealth of its technical and material resources.

The official responsibilities of a military mission as defined in one official publication are:

*First, it is charged with helping to raise the military capabilities of the country in which it is stationed. Second, it performs a kind of inspector's role for the United States by preparing studies and reports on the military aid program, to help ensure that the program returns the maximum degree of improvement in the over-all military quality of the country's forces.*

If these were the extent of the vital services within the capabilities of a military mission, the task of fulfilling the goal of the military aid program and of effecting maximum utilization of the military personnel would be relatively simple and would require little more than routine personnel procedures.

### Not Automatons

Military personnel stationed overseas are not automatons; they are human beings with the mass of idiosyncrasies and traits common to mankind; they are affected by and they affect the social milieu in which they live, be it Zenith City or Teheran. They cannot escape their role as representatives of the United States; they cannot avoid being regarded as examples of our culture and of our way of life. Although other governmental agencies are more actively concerned with the social-economic-political front, the military representatives do not escape involvement in the ideological warfare. An American soldier may show a Thailander how to fire an *M1* rifle, but if, at the same time, he antagonizes that soldier and arouses a feeling of resentment against the American, the positive efforts of the advisor are wasted—the sowers of distrust find fertile ground. The furtherance of good will and friendship is as important as correct procedure in third echelon maintenance. The

former is not as apparent and as easily evaluated, but in the warfare of today ideas are as decisive as tanks and bombs. To some students the major struggle centers in the hearts and minds of men. What men think and believe are as important as the weapons they hold in their hands.

Members of MAAG occupy a strategic position in this conflict. To a limited extent they may be grouped with the tourists, the retired businessman, or the school teacher on a guided tour; to a greater degree they may be classed with the official representatives, members of the diplomatic corps, or economic aid missions; but their position may be extended beyond that stage. Although a military advisor retains his loyalty and allegiance to his native country, he is also, in a way, a servant of the host country for he is actively working to further the security and integrity of that country. Thus his personal activities, his mode of conduct, and his behavior pattern cannot be lightly dismissed nor relegated to obscure paragraphs in a G1 report. Our Government is not blind to those implications, and whenever American troops have been employed overseas, public relation policies and programs have endeavored to reconcile the inhabitants to the presence of a large number of Americans in uniform. Small groups may be quietly absorbed but during World War II millions of our citizens were stationed on foreign soil.

### To Minimize and Promote

In an effort to minimize the clash of cultures and to promote an atmosphere of mutual good will and respect, the Armed Forces presented numerous training films, conducted brief orientation courses, and published small handbook guides. Command responsibility was emphasized; public information officers worked feverishly to reduce points of friction and to smother disrupting incidents. That this program was not highly successful is no indictment of those preventive measures; they were swamped by the sheer weight of numbers, by the psychology of war, by the compulsion of more basic missions, and by the heterogeneous composition of the American forces. Since the war, and with the disappearance of some of the negative factors, a more favorable climate has been created for the development of mutual respect. Even now, as then, the presence of United States soldiers in a foreign country is not always characterized by an atmosphere of universal good will, cordiality, and genuine friendship.

The primary purpose of this article is not to review the familiar but grossly distorted list of charges and complaints nor to prepare another tourist handbook on "Conduct Abroad." Although breaches of correct conduct and overt violations of regulations governing proper behavior are usually committed by a small group of malefactors, a larger category simply fail to recognize certain social customs. And even the well-intentioned are seldom conscious of the implications of their acts and words. Such omissions on the part of civilian tourists are usually graciously forgiven but like consideration is not tended members of MAAG; in their role as official representatives, their errors and social mistakes are regarded as semi-official acts. Fed by ignorance, superstition, rumor, and the deliberate machinations of Communists, small human failings, unintentional insults, and discourtesies are expanded into an impressive indictment against all Americans. Frequently the fantastic and exaggerated charge sheet includes the following specifications: undue familiarity toward the native women; exhibiting a superiority complex and regarding local citizens as social and racial inferiors; failing to appreciate the historical culture and spiritual resources of the country; acting as advance agents for political domination by the United States and foreign exploiters; disregarding the

local rules of conduct and failing to act with proper courtesy and consideration; disrupting the standard of living and destroying the wage scale and market prices; indulging in boisterous and crude behavior; arrogantly disobeying the police regulations; and continually complaining about local accommodations, services, and conveniences.

### Slight Validity

Although the bulk of these charges possess slight validity and only a few Americans contribute to this catalogue of iniquities, such appeals to reason are not generally accepted by the great mass of people. One major deterrent is undoubtedly the Communist propagandists who hover vulturelike about the scene, ever ready to accentuate the conflicts of different cultures and to erect towers of propaganda on small foundations. The educated minority, the most articulate strata of society in those small countries which have only recently gained freedom from domination by one of the great powers, frequently harbor a deep resentment against all Westerners, especially those associated with the so-called imperialistic nations. Since World War II the United States is frequently included in that group. Such individuals are ever on the alert to detect "arrogant" behavior on the part of their former "superiors." This deplorable heritage of the age of colonial powers can only be erased if the Western Nations take the initiative in establishing the desired *rapprochement*. Such an effort requires knowledge, tact, judgment, and humility. At the present time, however, the preliminary stages are not fully attained. As previously indicated some Americans and their products, mainly motion pictures, actually supply choice bits for the propaganda banquet. When impressions are formed by typical Hollywood motion pictures and lurid books, and fortified by direct observation of a *few* loud-mouthed tourists and a *few* uncouth soldiers, the Communists need not supply additional data. To the impressionable and naïve it is all there—the swaggering, braying braggart, the materialistic-minded Babbitt flashing a vulgar display of wealth, the petty, whining, complaining, grasping, provincial American wife, and the drunken sex-driven American soldier. The fact that the majority of American tourists are guilty of nothing more than a lack of sophistication, that an army of civilian advisors and technicians are making positive contributions, that material aid is being freely extended, and that military missions are contributing to the internal and external security of the country, does not always nullify the negative impression.

### Combat the Distortion

In what ways can the visitor and the military officer combat this grossly distorted conception of the American? In the first place he might act as he would in his native town and not as a fancy-free delegate to a convention in a faraway city. Compliance with the standard code of conduct (including manner of dress) and observance of the ordinary rules of courtesy contribute greatly toward eliminating the bulk of the legitimate complaints. Also, one should never forget that he is "the foreigner," that the people are not required to observe the social conventions and customs of Junction City, USA.

The fact that their way of life, their habits, customs, and political and social attitudes differ radically from those observed in the United States should not be interpreted as evidence of stupidity or willful obstinacy. If their laws and regulations appear absurd and ridiculous, such an evaluation does not provide sufficient basis for the deliberate violation of legal and quasi-legal restrictions. If one detects corruption on the part of public officials, if one's home is stripped by thieves, or if his fountain pen disappears

on the main street, do not assume that the people are inherent thieves and beggars—poverty never ennobles, it debases human nature. If one is appalled by abysmal filth, poverty which breeds superstition, ignorance, corruption, and thievery, do not assume the flaming robes of a crusader and attempt to preach American concepts of society to a people who have evolved their own ideology which is consistent with their own background.

Do not become a partisan of any local group nor voice any opinion on local issues. The utmost discretion should be followed in drawing comparisons between the United States and the host country. On the other hand a friendly and sympathetic interest in the local scene is commendable when it is not marred by harping criticism. Thus one may safely assume the role of a student but not that of a Savonarola. The inhabitants do not care to listen to criticism from outsiders—they are aware of their own deficiencies and limitations—and in their human reaction they frequently erect a defensive system characterized by claims to "culture," spiritual resources, historical glories and relics of the past, and illusions of present and past grandeur.

Such an elementary code of conduct and basic courtesy should be observed by all classes and groups of Americans, civilian as well as military. However, much more than compliance with the rules of decent behavior is required of the officer assigned to a military mission. The fact that his objectives are to contribute to the military efficiency of the allied force and to assist in the proper utilization and maintenance of Mutual Defense Assistance Program equipment, calls for professional competence, a high degree of efficiency, and a well-rounded military background. The official hosts may discreetly ignore lapses of conduct but they will deeply resent the presence of incompetent advisors; the assignment of such individuals suggests that the United States regards their country as a colonial dependency, unworthy of serious consideration or true respect. Fortunately the majority of officers engaged on mission duties possess the desired degree of professional competence. Wherever the recommendations of the advisors are truly accepted, the military establishment inevitably achieves greater military proficiency. The problem is to induce the local officials not only to accept the recommendations and advice but also to ensure the active execution of directives arising from these friendly suggestions.

### Two Essential Attributes

Naturally the assigned officer should possess those traits and actively function in those roles that make for successful military leadership. Two specific attributes, however, should be emphasized as essential and as important as professional competency. These are: the capacity to observe objectively, rapidly, and comprehensively and the ability to instruct or supervise instruction. Of the two, the first is more constantly employed. The representative must be a very astute observer; he must be able to distinguish between superficialities and essentials, between staged performances and actual capabilities; he must be able to quickly and accurately penetrate the layer of artful pretentions that sometimes conceal real difficulties. His area of observation is not limited to obvious problems of training and utilization of equipment, but also encompasses a wide variety of tangible objects and abstract factors; he is frequently required to evaluate the recreation program, political indoctrination, military-civilian relations, military construction, troop gardens, adequacy of technical services such as medical supplies, purchasing and contracting systems, individual behavior patterns, military proficiency of allied officers, and subtle social relationships.

As an instructor the American officer is occasionally called upon to present units of instruction at troop schools, regional conferences, and service schools. More frequently, however, he supervises instruction conducted by the organization where he is serving as an advisor. Since he does not possess the command authority to effect corrective action on noted deficiencies, his effectiveness as a supervisor of instruction is conditioned by his degree of perseverance, humility, humor, tact, and judgment.

Such qualifications and attributes are not specially designed for the military advisor; the successful officer habitually applies such basic leadership principles as "know your job" and "know yourself and seek self-improvement." If these represent the limit of the requirements of those assigned to military aid advisory groups, no problem exists and the various missions are effecting maximum contribution to the defensive system of the world. But a military advisor, living in an alien land and working with foreign troops, cannot be compared with the officer assigned to a United States Army unit or installation.

A basic principle of personnel management is "the right man on the right job," but unfortunately the requirements and ideal qualifications of a military advisor seldom fit the conformations of the typical American officer's personality. Of the millions of American troops who served overseas during World War II and the postwar period, only a few truly left the United States even though they spent years on foreign soil. Wherever the American soldier went he carried his familiar surroundings with him—the unit, the Post Exchange, and the club—these were (and are) the center of the universe. Those who adequately assimilate to the environment of a foreign country are, in a way, cultural mutations. During periods of peace the military organizations have no need for such individuals except on obscure and unique intelligence missions. The few that are encountered are regarded as odd creatures and nonconformists; in fact, they usually emerge from their dim civilian retreats only during times of total war efforts. At the present time our Armed Forces are not so rich in manpower that they can afford to set aside a large group of foreign specialists that will man the advisory and liaison groups; there is no place in the contemporary officer corps for the eccentric, and the odd character, the "queer 'un." The way has been rigidly prescribed, the approved code of conduct carefully delineated, and the areas of cultural and professional interests circumscribed.

If the Army does not have available a host of T. E. Lawrences, Spencer Chapmans, and Wingates of Burma, it does possess a pool of professionally competent officers; many of these are potentially qualified for such assignments but their aptitudes are not revealed in their 201 files. And the officers themselves will not admit to the possession of such gifts; it does not occur to them that they are actually capable of getting along with "a bunch of ignorant foreigners." They have been so schooled in the folkways of their social group that they associate such attributes with softheaded civilians. It is contended that given certain aptitudes and a reasonable degree of native intelligence, even the most biased and provincial individual can be trained to understand and appreciate an alien race and culture. If the following devices are utilized the validity of this thesis might be proved.

### Aptitude Test

Prior to being definitely assigned to a mission the candidate should take an aptitude test. Such a screening device could be constructed by a team of social anthropologists and psychologists. This test would eliminate those individuals whose social mores and mental patterns

are so firmly entrenched that corrective training and exposure to stimulating experiences would fail to alter their rigid and dogmatic convictions. No stigma, however, should be attached to those who fail the tests; most of us are characterized by limited mental and emotional flexibility. Only rarely does one appear who possesses absolute tact and instinctive perceptions. These are but typical deficiencies which do not seriously impair an officer's efficiency in routine assignments.

The officer who is endowed with friendly curiosity, imaginative sympathy, unaffected tact, intellectual awareness, rational objectivity, and true humility will experience no difficulty in adjusting to a foreign social environment. A carefully designed series of objective tests would suggest the presence or absence (to a degree) of these traits and qualities. It is feared, however, that some rather objectionable types might escape detection—the gracious but condescending social worker, the let us be charitable to the heathen do-gooder, the seeker after "exotic cultures," or the thrill-hunter, avid for new sensory experiences.

### Intercultural Education

Those who successfully complete the initial examination should then be given a planned intercultural education. Since the desirable period of several years study is not practical the course of instruction would be compressed into a 3-month orientation course. During that period the students would be assigned to a "country house" where the pattern of activity would tend to approximate the social environment of the designated area. Under the supervision of native instructors and counselors the students would follow the routine of daily life characteristic of the official class of the prospective host country. Their formal studies would be concerned with geography, racial, political, and cultural history, elementary anthropology, and sociology. While not attending classes they would receive informal instruction on social manners, the ritual of official business, and conduct in public and in private. Obviously such instruction would not be restricted to an 8-hour working day. At the conclusion of the orientation period this group would naturally refrain from breaking the taboos; they would adhere to the accepted rules of social conduct that characterize a gentleman of the host country.

It is conceded that foreign culture can best be studied in the area of the culture itself, and that actual residence in a foreign country offers opportunity for a more spontaneous assimilation of the native way of life. But if these advantages are to be exploited the American must assume the role of an expatriate and sever his contacts with fellow Americans. The position of an American official representative does not permit such a latitude of action; his duties and responsibilities impose certain restrictions on his movements and activities. In addition there must be some practical limitations imposed on the time and funds allotted to this conditioning period. Furthermore, during the laboratory phase some individuals, who successfully completed the preliminary examination, would probably fail the practical tests presented during the acclimatization phase. If these failures occur abroad, the results would not only be expensive but also embarrassing. Naturally it is assumed that carefully screened and indoctrinated individuals, who have completed the preliminary examinations and training and who are assigned to a foreign mission, will continue a program of intercultural education. The actuality of one's presence in a foreign enviornment tends to modify social habits and to soften familiar distractions; the foreign scene also stimulates curiosity, sharpens and quickens sensory perceptions, and even affects the more basic motivation patterns. Unfortunately these al-

tered behavior patterns sometimes assume the form of violent rejections of restraints and socially desirable repressions that made for civilized conduct in the home country.

### The Language Barrier

If it were possible to ignore certain factors, such as professional qualifications, maximum utilization of personnel, length of time, and expenditure of funds, the selected advisors should also attend the Army Language School. Since it would seem that this worthy objective cannot be fully realized, the student should receive limited language instruction during the 90-day orientation course. Although this instruction would necessarily be limited to the acquisition of stock phrases, typical expressions, and conventional remarks, the evidence of genuine interest in the language would be noted with approval by the native people. It is anticipated that this brief introduction will constitute the basis for further study when the officer is stationed abroad. While the military personnel are serving with a mission they should be required to attend a series of systematic and scheduled language lessons. This problem cannot be solved in a casual manner; attendance should be compulsory even for those classes conducted during nonduty hours. Whenever possible these personnel should be placed in situations that compel them to utilize their basic knowledge of the language.

Failure to speak the language of the country is perhaps the greatest single obstacle to an understanding and appreciation of the people. The language barrier is not only a screen which encloses the American in a narrow corner but it also prevents him from developing the kind of *rapprochement* that leads to mutual respect and friendship with other than a small group of official coworkers. Furthermore, this handicap may seriously affect the successful accomplishment of his military mission. Too often the officer's only medium of contact is the assigned interpreter or liaison officer who filters through the language screen only those facts, opinions, and propaganda which are approved by the official line. Sometimes, motivated by political reasons or guided by instructions from higher echelons, the interpreter deliberately distorts translations. Even the most conscientious and objective-minded interpreter unconsciously slants or colors the translation. And there are those who become so intoxicated with their power that they seize the opportunity to peddle their own basket of fish.

### Two Other Suggestions

In addition to extensive language instruction for the military advisors two other suggestions are frequently presented as solutions to the language problem. One would utilize first generation Americans who are conversant with the language of their parents' native country yet at the same time are competent professional soldiers in the Army of the United States. Even this group, however, does not always escape the ties and pulls of native allegiances and local kinships. The greater objection, however, is the attitude that the native people frequently adopt toward the expatriates. They seem to resent their American cousins who are sometimes branded as opportunists, swollen with pride and conceit. The inhabitants who endeavor to rationalize their hard lot look upon migrants as people who have forgotten the culture of their ancestors and the pride of the ancient race. They are now "rich Americans"—fat, solid, materialistic, and secure—while those who suffered the vicissitudes of the Old World must cling to the ragged edge of existence.

The other solution, and one that appears more feasible, is the extensive utilization of graduates of the language schools. To a degree this requirement is being fulfilled, but the language schools also have other commitments—Army Security Agency, Counter Intelligence Corps, foreign

area specialist program, and military intelligence interpreters and translators. To require every officer who is scheduled for a military mission to attend a language school would require a heavy expenditure of funds and personnel. Furthermore, if the language school requirement were superimposed on the orientation course, a large number of military personnel would be immobilized in a pipeline status for an excessive period of time. Such an extensive preparation would also tend to develop a large number of "specialists" and would introduce military mission personnel into a field presently occupied by the foreign area specialists.

### Policies

The adjustment process is not completed with the screening tests, the orientation course, and the language training. In addition to the standard rules of conduct that all Americans should observe, employment of the following policies would enhance our prestige, eliminate critical sources of enemy propaganda, and promote genuine friendship.

The chief of the military mission should demonstrate his active interest and concern in this program through command channels; naturally he would enforce immediate disciplinary action against those individuals who display antagonism against the country and its people or who willfully violate the accepted conventions of the country. He should also regard the Public Information Officer as one of his most important staff officers. The Public Information Officer who is schooled in the customs of the country and sensitive to local reactions will not confine his activities to the avoidance of unfavorable publicity or to the care of visiting correspondents.

Emphasis should be placed on fieldwork; all officers assigned to the mission should be required to spend some time in the field, actually living and working with the troops. Residence in the larger cities and occasional command inspections of handpicked units will not reveal the actual situation nor provide opportunity for intimate observation of the ordinary folk. Too often the advisor limits his activities to numerous staff conferences, "briefings," perusal and preparation of elaborate reports, observation of staged demonstrations, rehearsed field exercises, and "command inspections."

The standard of living maintained by members of the mission should not grossly exceed that realized by the substantial citizenry. The ideal solution, of course, would be the establishment of a standard adjusted to that level attained by the corresponding members of the military class of the host country. If United States military personnel were compelled to live under such restrictions, their morale and their professional efficiency would be adversely affected. Perhaps some kind of compromise is possible—provision for a standard of living that will not seriously affect the efficiency and morale of the personnel yet not so ostentatious as to breed native envy or to stimulate unfavorable comparisons.

### Role of Dependents

The tour should be of sufficient duration to fully exploit the services of the personnel. Even the most apt pupil requires a period of cultural acclimatization. One-year tours are wasteful when one considers how little productive time is left after the periods consumed by travel and leave; one is tempted to advocate 2 years as the normal tour. This may be somewhat inflexible. The official policy is governed by the desire of the Department of the Army to maintain the morale, welfare, and professional efficiency of the Army. As living standards differ and change in all the areas the length of tours are under constant revision.

Morale and welfare are, of course, affected by the presence or absence of dependents. Nevertheless, one might seri-

ously question the wisdom of permitting families to accompany or join members of a mission team. When one's family is present, the individual is more inclined to maintain the American-in-exile complex. While the men through their professional work are able to develop some areas of contact with the local scene, the women are denied like access. This is one reason why American wives tend to cling to a provincial attitude.

Isolated in small transported communities, dominated by the Post Exchange, the clubs, and the housing projects, many women drift into a pattern of small activities such as bridge games, flower-arrangement classes, teas, and shopping tours. In fairness it must be admitted that this small world is not of their own deliberate creation; the freedom enjoyed by American women is not normally the possession of their sisters in other countries. In Hispanic-culture countries, for example, the men entertain their friends in clubs, bars, and restaurants; in Japan the congenial parties take place in teahouses; in Islamic countries most of the women are secluded behind the veil of the purdah. Even in many countries of western Europe the social life of women remains somewhat restricted. Furthermore, the language barrier is a formidable obstacle for foreign women seldom speak English. These factors, together with the natural provincialism of the American women, frequently prohibit the adjustment of American women to a foreign way of life. This adverse situation might be modified if the personalities of the wives were considered as well as the traits of their husbands, and if the families were also exposed to an orientation course. Opportunity to become acquainted with native life is not completely denied the American woman; foreign women are very curious about Americans; limited entry may be gained through missionary groups or religious organizations; sometimes American women are given the opportunity to participate in charitable activities; in some countries they are invited to become members of Army relief and aid societies organized by wives of military officers.

## Conclusions

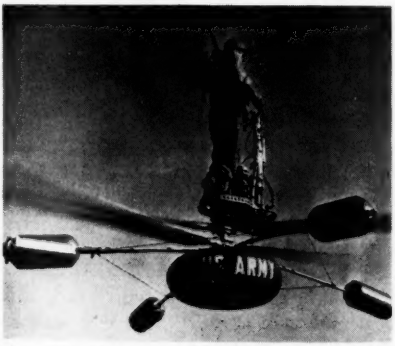
The suggestions which have been presented are generally concerned with defensive tactics, with the emphasis on preventive or passive measures. If an individual, however, were to abandon himself wholeheartedly to the pursuit of these objectives he might become more native than the natives. In endeavoring to blend into the native landscape he encounters the danger of losing his identity as an American. To refrain from criticism of one's host is not equivalent to self-abasement nor denial of the American way of life. The envoy should not hesitate to act as an advocate of his own country to earnestly and sincerely present the virtues and positive aspects of American life. The educated foreigner is not overwhelmed by the quantity of material things, by baseball teams, by plumbing systems in American homes, by vending machines, by supermarkets, and "drive-ins," complete with waitresses in shorts. He is more likely to be favorably impressed by our large scientific research centers and projects, schools and universities, provision for the care of the aged and infirm, the magnificent charitable enterprises, the exciting history of the country, its natural grandeur and variety of appeal, the unlimited opportunities granted people of all races and classes, the positive contributions of fair enterprises, the great water control systems, the area projects such as the Tennessee Valley Authority, the public utilities systems, and the scientific and cultural contributions of the United States.

# MILITARY NOTES AROUND THE WORLD

## UNITED STATES

### *Increase Infantry Mobility*

A series of experimental tactical tests will be conducted by the Army with the individual helicopter type lifting device

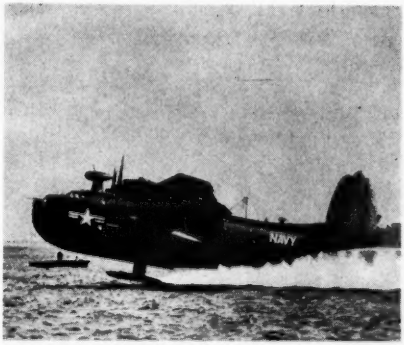



**Aerocycle improves battlefield mobility.**

known as the Aerocycle. It is believed that the machine will give greatly improved battlefield mobility to the combat infantryman. Initial tests proved that operators without any previous flying experience could become proficient operators after only 20 minutes of instruction. The pilot stands on a platform over the rotor blades and guides the 200-pound Aerocycle by leaning in the direction in which he wishes to travel. The control mechanism, covering vertical motion and speed, appears similar to that of a motorcycle. The machine, carrying a payload of about 300 pounds, will fly at an estimated maximum speed of 65 miles an hour with a range of approximately 150 miles. It is capable of landing on either land or sea. —News release.

### *Hydroski Test*

The Navy is testing the use of hydroskis on large seaplanes to determine if they decrease the impacts encountered during rough water landings and takeoffs. These



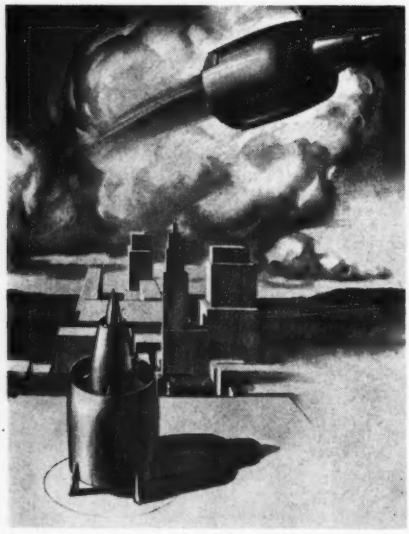

**Navy tests hydroski on heavy seaplane.**

tests mark the first time that the hydroski has been applied to a plane in the patrol bomber category, the gross weight of which is 55,000 pounds. The tests are expected to show that the rigid ski mounted on a

single strut extending downward perpendicularly from the hull acts as a better shock absorber for the seaplane landing than the conventional "vee" bottom hull. The ski is located slightly forward of the plane's center of gravity and has been undergoing tests in three different positions—close to the hull bottom, partially extended, and fully extended. The purpose is to determine the best compromise position for the ski which offers a better shock absorber effect when fully extended but less aerodynamic and water resistance when only partially extended.—News release.

### *'Flying Barrel'*

A contract to conduct research on an annular-wing or ring-wing type aircraft has been awarded by the Office of Naval Research. The ring wing is best described as a "flying barrel" consisting of a circular or barrel-shaped wing which is open at each end and has the body of the aircraft supported inside the barrel wing. The body of the aircraft is smaller in outside diameter than is the inside diameter of the barrel-shaped wing so that air passes over the inside surface of the barrel wing as well as over its outside surface. The ring wing can be powered by a conventional piston engine or a gas turbine driving propellers, or it can be jet propelled by a turbine engine. It combines certain advantages of the helicopter and the airplane in that it can take off and land vertically as does a helicopter, and it can fly forward at speeds comparable to a conventional propeller or jet driven airplane. Work on the plane is now centered on the development of a single-seat military type for experimentation, but problems foreseen for future designs concern the seating of passengers so that their seats will adjust to both horizontal and vertical positions and the question of where the passengers will enter the plane.—News release.



"Flying barrel" may be future Navy plane.

### *Airborne Radio*

A versatile new long-range radio transmitter-receiver for jeeps, tanks, and trucks that goes on the air moments after being parachute-dropped in its vehicle has been developed for the Department of the Army. The radio has been engineered to replace models used during World War II and the Korean fighting and is four times more powerful than these sets. It combines advanced design with better parts to pack more power into a smaller space, and covers more distance—in recent tests over 2,000 miles—gives clearer signals, and gets through more often. In forward combat areas the extremely wide frequency range of the new set offers a better opportunity for infantry, artillery, and armor to talk to each other, knitting these units into a harder-hitting tactical team. Messages now can be sent over mountains or other barriers without relay radios. An airborne group parachuting a few hundred miles inside enemy lines can report almost immediately to command head-

quarters. Both voice and radio teletype messages can be sent and received at the same time. A few added parts link in the lightweight 100-word-a-minute teletypewriter, an impossibility with earlier sets. It is easy to use and operate and has seven channels preset as in pushbutton models. The operator merely switches to the one he wants, presses his microphone button, and talks. By releasing his microphone button, the receiver cuts in automatically. A total beginner can be taught all he needs to know about using the set in 10 minutes. The radio does the rest by automatically tuning itself and its antenna. Stability has been so greatly improved that crystals are no longer needed to keep the new set tuned on a channel. The set is powered by its vehicle's regular battery, plus a special generator, and fits snugly into its reserved space in reconnaissance cars, tanks, and jeeps. It works in temperatures ranging from minus 40 to plus 149 degrees Fahrenheit, in rain, sleet, or snow.—News release.

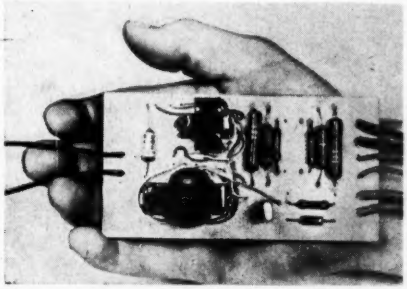
### *Self-Propelled Bridge*

A self-propelled armored bridge (SPAB), which consists of a standard tank chassis revamped with the addition of four hydraulically operated ramps, has been developed to aid wheeled vehicles in crossing gullies and creeks which might otherwise prove to be impossible obstacles. The ramps can be dropped or raised to permit the passage of these obstacles. Since the SPAB has built-in pumps, it can be operated in streams where the water comes almost to the top of the hull.—News release.

**Self-propelled armored bridge developed.**

### *Miniature Repeater*

The development of a powerful miniature repeater, which when spliced into a communications line every 6 miles permits the combat soldier to talk over a distance of more than 30 miles by phone, has been announced by the Signal Corps. This newest combat aid works automatically for the life of the equipment. Its dozen small parts, including the transistor which is the heart of the device, are sealed in a plastic type case thus keeping out dirt and moisture. The total weight of the device is only 3.5 pounds including case and battery. In the combat area the repeater and batteries fit into a canvas case. Earlier vacuum tube models are big and costly and require constant adjustment. Additional tests are planned by the Signal Corps before the repeaters are issued to troops.—News release.



**New repeaters increase range of phones.**

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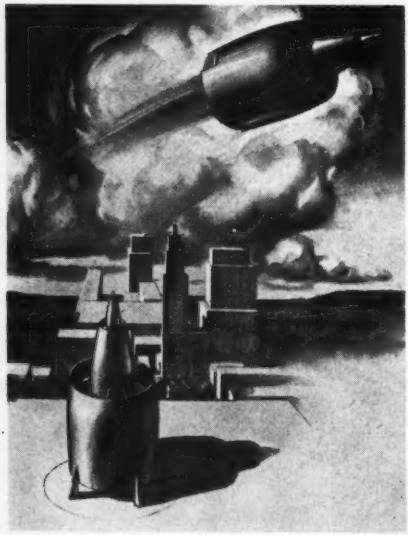

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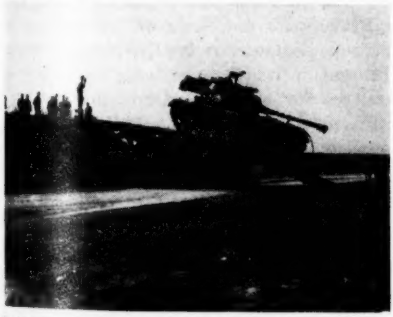

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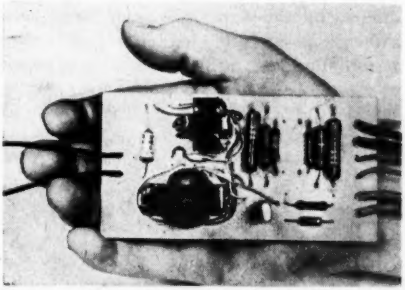

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United States joint use, effective 1 March 1956. The new alphabet is as follows: Alfa, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliett, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Sierra, Tango, Uniform, Victor, Whiskey, X-Ray, Yankee, and Zulu.—News release.

### 'High Herman'

A device known as "High Herman," developed by the Army Corps of Engineers, makes it possible to clear a minefield with a minimum loss of life, time, and equipment. It consists of a series of cast metallic rollers attached to the front of a tank. The tank, pushing the device ahead of it, then proceeds across the minefield at a slow speed. The overhead swivel mount enables the tank to retain full maneuverability. The rollers explode the concealed mines with no damage to the tank itself. In demonstrations already conducted the device has proved to be an important new factor in maintaining the ability of an armored unit to move against an enemy with the speed and mobility so essential to successful armored operations.—News release.

**Device aids tanks in crossing minefields.**

### Industry Dispersal

Because of the vast destructive reach of today's hydrogen bomb and the intercontinental missiles of the future, the Government has adopted a new policy for dispersing essential industry. The Office of Defense Mobilization has issued an order calling on each company which builds a new plant to locate it outside the presumed range of the type of bomb most likely to be dropped on its city. The Commerce Department will make an individual decision on each plant site, except in the case of military projects when the Defense Department will have final say. The arbitrary dispersion rule that plants should be 10 miles from the rim of a target area has been abandoned. Under the new rule, the Government will determine individually which sites for proposed new industrial plants would be safe from enemy weapons. In addition to other items, the Government will also consider the plant's own built-in resistance to blast damage, natural barriers which help protect it, and the extent of damage the plant could undergo without being disabled.—News release.

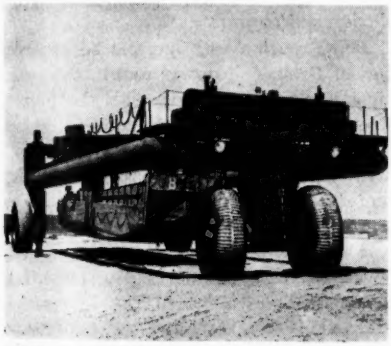
### Change Name

Because of the broadened scope of the school's curriculum, the name of the Medical Field Service School at Brooke Army Medical Center, Fort Sam Houston, Texas, has been changed to the Army Medical Service School. Instruction in military medical subjects was begun at the school in 1920 with emphasis on all aspects of field medical service for the Armed Forces. Present instruction includes a variety of courses for officers and enlisted men and women. All newly commissioned medical service officers receive a basic military orientation course at the school. Qualified medical service officers are eligible for additional training in such courses as hospital administration, nursing administration, military neuropsychiatry, neuropsychiatric nursing, physical therapy, medical supply, and other related subjects. Enlisted personnel are offered courses which enable them to give technical assistance to medical officers in the care of sick and wounded patients, including laboratory procedures, bedside patient care, preven-

tive medicine, dental assistance, x-ray, food inspection, neuropsychiatric procedures, social work, and operating room procedure.—News release.

### *Landing Craft Retriever*

A machine which is a highly intricate arrangement of hoists, wheels, and engineered power enabling it to straddle a 67-ton vessel and literally lift it out of the water is expected to save the Army



**Landing craft retriever tested by Army.**

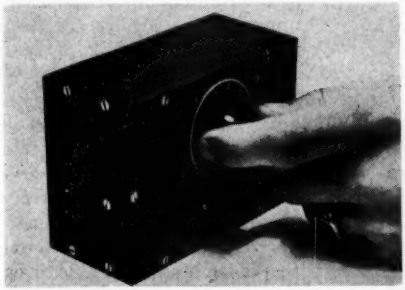
Transportation Corps millions of dollars through mechanized recovery of stranded landing craft. The machine can "right" a capsized or stranded craft, transport it to deeper water, or carry it bodily out of the water and up onto the shore. It was constructed in answer to a request by the Army for a new concept of retrieving equipment needed to handle the large percentage of craft which become impaired during landing operations. Studies reveal that only 10 percent of the landing craft put out of action during World War II were the result of direct enemy activity. Most were put out of action by forces of nature such as rough seas and high winds. A system of simple electric switches makes it possible for one man to operate all functions of the 101-ton unit, although a crew is maintained for attaching hoist cables to the grounded or capsized craft. The machine can recover stranded or capsized vessels in water up to 8 feet deep and can lift any craft up to and including the large *LCM-8*. The retriever is 75 feet long, 38 feet wide, and 22 feet high and when fully loaded can climb a 20 percent grade. The machine carries eight floodlights for night operations.—News release.

### *High-Velocity Gun*

A gun that uses hydrogen as its propelling medium has been designed and built for the Army's Aberdeen Proving Ground Ballistics Research Laboratory. It fires projectiles at velocities 11 times faster than sound and is a research tool designed to investigate problems ranging from target damage to in-flight surface conditions. The gun is said to be capable of firing projectiles weighing as much as 1 ounce at speeds of approximately Mach 11.—News release.

### *Fallout Detector*

A small battery-operated atomic radiation fallout meter has been developed by United States Naval Research Laboratory scientists. The device is simple and inexpensive and detects the presence and



**Radiation fallout meter developed by Navy.**

amount of radiation in atomic fallout. It is expected to be very important for both military and civilian monitoring teams in determining the degree of danger from this byproduct of atomic explosion.—News release.

### ROTC Training

During the first 6 months of 1956, it is expected that about one-third of the 6,000 Army Reserve Officers' Training Corps (ROTC) graduates will enter active duty and serve normal 2-year tours. The balance, about 4,100 graduates, will be called for 6 months' active duty, after which they will be assigned to active participation with Reserve units. The present plan affects only those graduates who will receive commissions before 30 April. A program for the June graduates will be announced at a later date. A reduced requirement of the Active Army for junior officers and an increase in the number of Reserve officers voluntarily remaining on extended active duty permits this move at a time when junior officers are particularly needed to bolster Reserve forces. Quotas for the 2-year active duty training will be filled first by Distinguished Military Graduates who have applied for Regular Army Commissions and by volunteers. The remainder needed will be selected by standard methods to meet branch of service requirements. Officers selected for 6 months of active duty will join and train with Ready Reserve units after their active duty training.—News release.

### Dehydrated Meat

Dehydrated uncooked steaks and boneless pork chops which can be restored to their original luscious and nutritious state are the end products of a new food preservative process being developed at the Army Quartermaster Food and Container Institute. It is expected that the meats will remain nutrition-laden and palatable even when stored as long as a year at temperatures up to 100 degrees Fahrenheit. It was pointed out that the process would give new and appetizing food items for troops in combat situations, and also offers tremendous advantages through conservation of vital shipping and storage space. The steaks and chops will reduce to approximately one-fourth of their original size. Dehydration of the raw meats is done by free-drying under vacuum and the maximum moisture content is 2 percent. Commercial adaptability of the new process is being tested and when practical sufficient quantities of the steaks and chops will be provided for test-use on Army maneuvers.—News release.

## FRANCE

### Order Helicopters

The French Army has placed an order for 50 *Djinn* helicopters and in the meantime is continuing tests with the preproduction models it has already received. A recent mountain rescue operation demonstrated that the plane can easily carry more than a ton of suspended load for an hour over a distance greater than 6 miles and with a difference in operating levels of between 2,300 and 2,630 feet. This demonstration confirmed the *Djinn's* operational versatility and its aptitude to extremely varied operations, including its capacity to deliver various loads along routes which are out of reach for surface transport.—News release.

### Cabin Ejection System

Numerous tests have been carried out with ejection cabins for supersonic aircraft by a French engineer whose aim is to guarantee the safety of the pilot. Several scale models of *Leduc 0.10* and *0.21* aircraft were released in flight from the *Languedoc* transport plane. All of these models were equipped with an automatic system which controlled the delayed-action separation of the cockpit from the rest of the airframe. The trajectory of the two elements, and in particular that of the parachuted cabin, were recorded on film. Following this primary series of tests, full-scale models of the cabins were released. In its actual state of development, the system carries a single lever which actuates the cabin separation mechanism,

the opening of the stabilizing parachute, followed by the final descent with the main parachute. Additional tests are being conducted and the resulting modifications are immediately incorporated into the *0.21* and *0.22* aircraft according to the report. —News release.

### Test Plane

While the French Air Force expects spring delivery of the production model *Vautour* aircraft in its three versions as a tactical support plane, all-weather fighter, and bomber, testing is continuing on the *Vautour 09*, all-weather fighter. The *09* is powered by a 9,925-pound thrust *Avon 41* engine while the production model has a 7,720-pound thrust *Atar 101 E 3* jet engine. Endurance tests and bombing, gun, and missile firing trials are being effected with the other prototype and preproduction aircraft, while the *09* will contribute practical information on the behavior and performance of the *Vautour* airframe equipped with high-thrust engines.—News release.

## BRAZIL

### Production Increases

During 1955 the production of coal and aluminum in Brazil showed increases. In the first 6 months of 1955, the production of aluminum rose to 968 tons while for the same period in 1954, it was 854 tons. For the entire year 1954, the production of aluminum was 1,462 tons. In coal production the first 3 months of 1955 saw 553,805 tons while for the same period in 1954 there were 489,184 tons. Coal comes from Rio Grande do Sul, Santa Catarina, and Parana.—News release.

### Push Oil Development

Plans to push forward the exploitation of recently discovered oil deposits in the vast Amazon basin have been announced by Petrobras, the Government oil monopoly in Brazil.—News release.

### New Capital

Plans to transfer Brazil's capital from Rio de Janeiro to the highlands near the nation's geographical center in Goias State are progressing. It was reported that expropriation of the 400-square mile site has been completed and that a 2-mile long landing strip has been laid out. Plans are already being made for streets and sewers. The city of Washington, D. C. is being used as a model for the new capital city. The new site is about 1 mile above sea level in the southeast corner of Goias State. The name of the new capital probably will be Veracruz, a name originally given Brazil by her discoverers.—News release.

## THE NETHERLANDS

### Intermediate Jet Trainer

The *Fokker S-14* intermediate jet trainer is on a demonstration tour of Air Force and Navy air training bases throughout

**Jet trainer to tour United States bases.**

the United States. The 2-place, 450-mile-an-hour jet trainer will first be shown to representatives of the United States Air Force Headquarters, the Air Research and Development Command, and the Royal Canadian Air Force. If there is sufficient interest expressed by these military agencies, the plane may be sent to other Air Force facilities. It was explained that the plane could be "Americanized" to fit some

phases of both United States Air Force and Navy jet training requirements. It is less complex than trainers currently operational with the military services and, therefore, requires less maintenance. The *S-14* possesses stall and other performance characteristics considered desirable for primary flight training phases. The trainer has a wingspan of 39 feet and an over-all length of nearly 44 feet. It takes off over a 50-foot obstacle in about 3,300 feet and climbs at the rate of 3,000 feet a minute. At 25,000 feet altitude, the plane has a maximum range of 600 miles without wingtip auxiliary fuel tanks.—News release.

## SPAIN

### *Ready Bases*

It is expected that American bases in Spain could be ready for emergency use by the end of this year. It was pointed out that delays encountered in the program for setting up the bases under a 1953 agreement were being eliminated. Completion for regular use would be progressively from next year. No extension in plans for the bases is under consideration at present although it was explained that the program was designed to meet the needs for the future as they arose.—News release.

## USSR

### *Pipeline*

The completion of an 800-mile oil pipeline from Omsk in southwestern Siberia to Tuimazy in the Bashkir republic in the Urals has been announced by the Soviet Government. It was reported that several thousand tons of Bashkir oil has already reached the Omsk refineries. The report said that the line was built in an exceptionally short space of time, spanned five rivers, and crossed hundreds of roads, marshes, and ravines. Preparations are now being made to build a 375-mile pipeline from Omsk to Novosibirsk in southern Siberia.—News release.

### *Controversial Project*

Reports that the Soviets have constructed a dam or causeway connecting Siberia and Sakhalin Island to raise the temperature of lands bordering the Sea of Japan have been revived again. Japanese engineers, who have long dreamed of such a project, say that an ocean dam across the Tartary Strait would block the cold currents which flow down from the Sea of Okhotsk into the Sea of Japan and would permit only the warm water of the so-called Black Current to circulate in this semilandlocked body of water. It is expected that this would raise the entire temperature of the Sea of Japan by about 20 degrees centigrade and land temperatures along the four main islands of Japan would be raised. Such Soviet Siberian ports as Vladivostok, normally iced-in 6 months of the year, would be made operable for the entire year. In the area where the Japanese planned to construct the dam, the Tartar Straits are reported to be less than 5 miles wide and range in depth from 13 to 29.5 feet, with a generally sandy bottom. If the cold currents were cut out, it is pointed out that Hokkaido, covered by snow most of the year, and northern Honshu Island would be capable of raising two crops each year, thereby helping to solve Japan's acute food shortages. The benefits to the Soviets would include the dream of warm water ports in the Soviet Far East and the southern regions of Siberia would be capable of producing semitropical crops. —News release.

## GREAT BRITAIN

### *Deflection Thrust*

A new method of deflection thrust tapped from jet engines, designed to improve "lift," may have an important effect on the design of future civil and military aircraft. An entirely new dynamic principle is involved in the jet flap method, as it is called. A thin layer of air bled

from the jet or gas turbine engine runs at high speed along the trailing edge of the wings. For low-speed flight, inclining downward, this acts just like a large conventional flap, generating very high lift and pushing the aircraft up. In level flight the long thin spanwise sheet of air issues horizontally and does not affect performance. This method can be used to retard takeoff and landing speeds, thus eliminating the need for long runways.—News release.

### Energy Test

In an effort to determine how much energy recruits use up in basic training, British Army volunteers are wearing a strange looking device. Named the *Imp* (Integrating Motor Pneumotachograph) the machine records the amount of air exhaled and collects samples of it for analysis to find out how much oxygen has been used. The information gained is expected to be used to give guidance on training and diet.—News release.

**Volunteers test energy used by recruits.**

### Powerful Engine

Later versions of the *Britannia*, Great Britain's 100-passenger airliner soon to appear on international routes, will be powered by the *BE 25* supercharged turboprop power unit. It is reported that this unit will give a constant power of 4,000 horsepower from sea level up to about 20,000 feet. At present the plane is powered by four *Proteus* propeller turbines.

**Supercharged unit designed for new plane.**

The turbopropeller plane is powered by a gas stream passing through a rotary turbine which drives a shaft geared to a propeller.—News release.

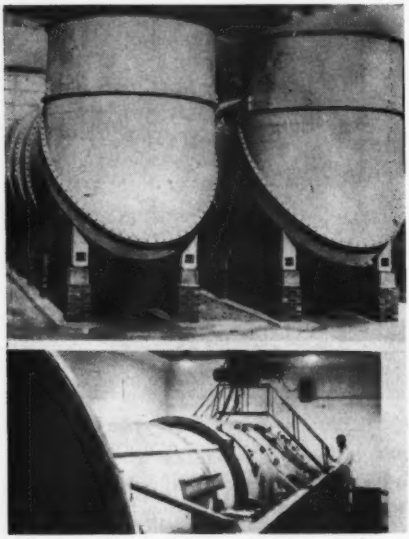
### Rapid Climber

In the course of test flights at the speed of sound and beyond, the *Fairey Delta 2* is reported to have flown faster than sound in a climb. The plane, described as the most advanced research aircraft yet built in Great Britain, is powered by an *Avon* turbojet engine. Built to investigate the characteristics of flight and control at supersonic speeds, the most novel of the plane's features is the streamlined elongated nose that can be lowered like a drawbridge by the pilot to improve forward view for taxiing and landing. Its 60-degree sweptback delta wings represent the most advanced configuration yet flown on a British plane. The wing has an ex-

ceedingly thin section and at the trailing edge may be described as "sword-edged." The main wheels retract fully into this thin wing.—News release.

### *Supersonic Silencer*

To meet the around-the-clock problem of testing powerful jet engines without disturbing nearby residents, a British



Silencer developed to test jet engines.

firm has designed a testbed fitted with a silencer which can handle engines of more than 30,000-pound thrust. A low-pitched rumble and the shimmering of exhaust gas are the only signs of the testing being conducted. The silencer can be telescoped to handle different lengths of jet pipes.—News release.

## INDIA

### *Push Aid*

The Soviet Union has offered to build a complete aluminum industry and to expand a major hydroelectric project in India according to recent reports. These and previous Soviet offers to build a steel mill and aid Indian oil exploration are believed only a beginning in the Soviet campaign of economic assistance. Indian officials are said to be examining every angle of any Soviet proposition and so far have confirmed only the offers for the aluminum and hydroelectric projects. India's small aluminum industry now produces about 7,000 tons a year and the second 5-year plan calls for increasing production to 30,000 tons. The Soviets were reported to be ready to supply technicians and machinery to aid the undertaking all along the line, from surveying and mining through the manufacture of finished products. The hydroelectric project is at Machkund, an Andhra state, and is already under construction. It will have a capacity of 120,000 kilowatts.—News release.

## CZECHOSLOVAKIA

### *Build Airpower*

A modern jet tactical air force of as many as 600 planes is reported to have been built by Czechoslovakia. In addition the Czechs are said to have an aircraft industry and a pilot training program capable of supporting 3 or 4 times the actual number of planes now in service. The force is organized on the Soviet pattern with the basic combat unit being the air regiment. The regiment normally has 3 squadrons of 15 aircraft, including reserves. Three air regiments comprise an air division. At the present time the country is believed to have five air divisions with a sixth forming. Fighter regiments are equipped with *MiG-15* jets which are built in local factories. Tactical bomber units are receiving *Il-28* twin-jet aircraft. A nationwide aviation training program is being pushed by the Government and this has resulted in a vast, semitrained reserve for the air force. Because of its homegrown aircraft industry, Western intelligence considers this air force the second strongest in the Soviet bloc.—News release.

# FOREIGN MILITARY DIGESTS

## The World's Strategic Picture

**Translated and digested by the MILITARY REVIEW from an article by Major General Emile Wanty in "L'Armee-La Nation" (Belgium) August 1955.**

THERE is no prospect of a generalized conflict of any short duration nor, moreover, of any decisive diminution of the international tension. The strategic situation on the planetary scale in 1955 merits examination for it is the principal element of equilibrium or of disequilibrium of the forces which face one another.

The map of the planisphere shows the world as we all, since our childhood, have learned to know it, in the form of Mercator's projection. That portion of the world won over to communistic ideology or dominated by it constitutes an immense, unbroken monolithic bloc. It is open on the west to two small, inland seas, the Baltic and the Black Seas; on the north to the Arctic Ocean; on the east to other cold seas but also to the tropical seas of the Far East. This land mass, whose continental character is obvious, is covered on the western European side by a veritable defensive boulevard which, the West declares, is an offensive assembly zone. This double-purpose belt is constituted by the states closely connected with the Soviet Union—Poland, Czechoslovakia, Romania, Bulgaria, Hungary, and the East German Republic. At the other end, Communist China possesses two advanced posts or flank guards—North Korea and North Vietnam.

Is the profound unity of this coherent ensemble more apparent than real? Only a grave crisis could reveal this. Until we are more amply informed, it will merit the name of bloc, while it is an exaggeration to apply this word to the Western camp.

This latter is made up of states which possess in common an uneasiness in the face of a potential threat from the East. However, considering first only western Europe, a peninsula of the Eurasiatic Continent, it is to be noted that its geographic configuration divides it. Norway is isolated north of the Baltic straits; Great Britain is an island and measures her steps prudently on the continent; the countries of France, Benelux, and Italy are coherent, but face in opposite directions commanded by the seas which wash their shores; the accession of Bonn, Germany, to the Western European Union, without modifying the surface to be defended, will give more consistency to the

ensemble and, particulary, will constitute a bond between Denmark, master of the straits, and her allies.

Spain holds aloof from any formal alliance but is virtually a party to the union through her agreements with the United States and her close ties with Portugal.

Italy is at the pivotal point between a possible western and a possible southern Mediterranean front with which Greece and Turkey are again associated.

The only true territorial bloc is the combination United States-Canada with its two, great maritime façades. Two immense moats separate this nucleus of the free world from its most directly menaced elements. One cannot but be struck by the capital importance of the maritime factor. Europe of NATO is a bridgehead with its back toward the sea. It depends on oceanic routes over which reinforcements, military equipment, and provisions should pour in an uninterrupted stream.

One other initial impression stands out. The United States, covered by two oceans, could fight at the very beginning, it appears, through her interposed allies—the European group of NATO on the west; Japan (perhaps), South Korea, and Taiwan, adherents of SEATO in the Far East.

However, let us take a look at a polar map. It casts a different light on this problem. The Eurasiatic Communist bloc and North America which appeared to be separated from one another by the ramparts of associated nations, face one another without intermediary along two arcs of the Arctic polar circle, and this approach is very close at the Bering Strait and fairly close between the string of Aleutian Islands and Kamchatka. Nothing separates them but the frozen expanses of the Far North, an absolute obstacle only a few years ago; but the prodigious advances in transcontinental and transpolar aviation now permit our assigning an active role to strategy in these regions.

### Possible Operations

From this very general examination one can conclude that each of the antagonists of an eventual conflict must include three great geographic fronts in his calculations—western and Mediterranean Europe, the Far East and the Asiatic southeast, and the Arctic regions. It is to be noted that the second of these fronts would be incumbent on Communist China while the United States would be mainly in control of all three.

Their characteristics are clearly different from all points of view. In western and central Europe the space available for withdrawal is small in comparison with the breadth and depth of modern style strategic offensives. There is still room on this front for the employment of large units of the conventional type—motorized, mechanized, armored, and artillery divisions, operating in close collaboration with tactical aviation. Everything indicates that the Soviet Union and her allies have in no way renounced this traditional, "conventional" form of war. They possess a considerable number of divisions which are far superior to the forces of NATO. The sending of these into action in accordance with the doctrine that issued from the victorious campaign of 1943 to 1945, would lead to initial victories without its being necessary to resort to the use of the tactical atomic weapon in the Soviet camp. On the other hand, assailed by means that were too powerful for it and with its back to the wall, the Western camp could resort to the use of this weapon as a supreme recourse permitting it to escape from an imminent defeat or to delay its occurrence.

The Far Eastern strategic front is entirely different. When one translates into figures the enormous depths of the continent, the impossibility of any decisive penetration by traditional means becomes obvious. A push northward from Korea and Manchuria, a landing by the Nation-

alist Army of Taiwan, the establishment of footholds along the coast, an appeal to fifth columns—all this is probably of a positive nature that could be realized by Western strategy. In view of the impossibility of China's acquiring aerial and naval supremacy, at least for the moment, there is little probability that the outposts of the peripheral cordon connecting Japan with the Philippines will be seriously menaced. Southeastern Asia, however, through inability to defend itself against outside aggression or internal disintegration would probably be doomed.

All things considered, the United States which is practically alone in carrying on in this area should be present there from the very inception of aggressive actions with naval and air forces available at the scene and with naval convoys and air bridges across the Pacific. If matters did not immediately assume a favorable turn, the mass irruption of Soviet long-range submarines could give rise to a very serious situation in the long communication lines.

This is, perhaps, the reason why certain great American leaders continue to affirm, from time to time, that the strategic atom bomb would be employed against objectives of the Asiatic Continent because they see in it the only means of carrying war into the depths of the Chinese interior. Its material efficacy in these human anthills would most certainly be fearful, but there is room for doubt with regard to its moral potency except in the direction of strengthening resistance—for it is Asia we are dealing with here.

### Arctic Action

The third strategic front, the Arctic front, excludes for a period that may still be fairly long, ground and even airborne operations by large units, if they ever do become perfectly adapted to the conditions of Arctic warfare. As is well known on both sides—but probably to a larger scale on the Soviet side—troops are actively engaged in testing equipment, methods of supply, and the technique of combat in the Far North to determine what is best adapted to the conditions there. It is also well known that the Soviets have established numerous airbases on the shores of the Arctic Ocean. An airborne irruption of Soviet forces into Alaska is a hypothesis which cannot be excluded, although its immediate consequences would not be great except for their moral repercussions. Other raids are conceivable against some of the bases which the Americans and also the Canadians are attempting to push into the Far North, either for the purpose of rendering them useless or for employing them in operations against American objectives. Everything here boils down to the question of ground installations which will meet the needs of a direct struggle between the two antagonists. Since transpolar flights have become technically possible and the radii of action of superbombers have increased, the problem has been greatly modified and, in truth, its factors are in a state of continual evolution.

Let us suppose that these planes—American—are based near Fairbanks, in the center of Alaska, and let us take as a unit of comparison the distance from this point to London, 3,600 miles. We have 3,300 miles from Fairbanks to Leningrad; 3,500 miles to Moscow; from 2,000 to 2,200 miles to the bases of northern Siberia; 2,500 miles to the Komsomolsk industrial region (eastern Siberia); and 2,600 miles to the Stalinsk-Novosibirsk industrial region. These figures would be smaller taking off from bases farther north, such as Thule, Greenland. There is no need to dwell on the fact that the situation is capable of being reversed. For example, superbombers taking off from the Siberian bases would be able to attack concentrated industrial or urban objectives in the northeastern part of the United States.

Let us pause for an instant after this

survey and attempt to draw general conclusions from this first rough appraisal of the situation.

We have three great possible global fronts—simultaneous or successive—with very different characteristics, objectives, and capabilities. Until further evolution changes the picture, we are still justified in assuming that in Europe the traditional forces—infantry, tanks, artillery, tactical aviation, and airborne units—will continue to be the major factors in the decisions, at least with the principal potential adversary; that on the Asiatic front the operations will be based mainly on air and naval forces, at least on the part of the United States; and that on the Arctic front long-range strategic bombing will probably be the only activity.

### Bitter Battle

It may be assumed that the three great arms of the service, the ground, naval, and air forces, each with its own chief of staff, mutually exclude one another when considering separately each of the three strategic fronts, but such a conclusion becomes inadmissible when integrated into one and the same plan on a global scale.

It is only too evident that a bitter contest is being waged between the proponents of conventional armament and formations, those of naval power, and those of strategic aviation. The controversy is so heated in the United States that in 1955 President Eisenhower appeared to be recalling the fact that he formerly had been the Allied Commander and was going to take the problem in hand in order to arbitrate and coordinate.

In the Soviet camp the same political and military authorities have control over these three fronts. There is a better understanding of the needs of each of them and progress in each of the services, ground, naval, and air forces, is harmonized in a continuous effort. As far as can be known, preparation for an eventual war is just as integrated as is the continental bloc.

This bloc offers no direct hold. Since the vain attempts of Charles XII of Sweden, of Napoleon and Hitler, it is known to be vulnerable, but incompressible. Even if the West had the desire and the means, such an idea would very quickly prove itself insane and disastrous.

If we postulate the unavoidableness of a third world war, he who assumes responsibility for it will have given himself over to infinitely complex calculations resembling in no manner whatever the determination of the "relationship of forces" of our military doctrine. He will believe that his chances of achieving a quick victory by means of a few decisive blows will have about an 80 percent chance of succeeding for no one, unless completely mad, can aim any longer at an exhausting war of several years' duration of the type of World Wars I and II. The Soviet statesmen and marshals appear to us to be more realistic than this—unless, perchance, there should occur a political return to a one-man dictatorship of the Stalin variety. In 1940 Hitler believed that chance was 85 to 90 percent in his favor. His calculations were wrong only on a single point. He was not facing an actual coalition, but an alliance of two large countries and the geographic presence of four resolutely neutral small countries. He successively eliminated the latter and broke the sword and buckler of France. On the basis of his memories of 1914-18, he believed that the fate of France would seal that of Great Britain. He had not been able to determine, especially in the psychological domain, which of his adversaries would be the most tenacious and, therefore, had not prepared for an invasion.

The situation is now entirely different. The Western coalition exists. It is clearly definite and organized. It possesses its points of strength and reveals its weaknesses—its internal divisions. For an as-

sailant who is determined to obtain a quick victory, the problem is to know the main element around which the others will gather, the one that is the supporting pillar whose collapse would quickly be followed by impotency. The answer is easy. It appears definite in the moral domain. The United Kingdom is, and will remain, the most tenacious, the most indomitable, but in the domain of economic, industrial, and technical capabilities there is no doubt that the United States is the "one to be knocked out."

Considering the European front only, she has divisions in Germany, a fleet in the Mediterranean, military missions almost everywhere, and airbases around the entire periphery.

A ground offensive of the conventional style extending from the Elbe toward the Rhine and the west would initially overrun and defeat the forces on the line. It is difficult to dispute this under present circumstances. The advantages that have been acquired by the Soviet bloc, territorial conquests, control over industrial regions, and the communistic organization of our conquered countries, would in no way be decisive. The war would be a long one full of sudden changes of situation. It would be frightful and as disastrous in the beginning for the temporary conqueror as for the others. This is probably taken into account in the calculations of the Soviet High Command. And it may include in these calculations the alimentary situation of the vast Eurasiatic territory cut off from the great outside food markets—the United States, Canada, Argentina, and Australia. At this very moment the accomplishments of the Soviet Union in the matter of agricultural equipment, organization, and efficiency are the object of open and severe criticism. Plans are being formulated for the transfer of labor. This subject would merit thorough study for it may have a profound influence on political strategy.

### Rapid Decision

A rapid decision, therefore, would be necessary. This cannot be obtained except by knocking out the central supporting pillar of the Western coalition at the very outset. Is this already possible under the present conditions?

Certain Americans reply in the affirmative. They see the great centers of production, which are too concentrated, too dense, and too vulnerable, annihilated by a few thermonuclear bombs; a metropolis like New York devastated; American public opinion literally stunned by the revelation of a pitiless war in which its major trumps would be swept away at the very outset. At the same time, perhaps, an intensive submarine campaign would be unleashed against the Atlantic lines of communication in which, not 47 submarines—the German equipment at the beginning of the war in 1939—but 300 modern submarines of the Soviet Fleet would be employed. The ground operations would not come until later and only if the initial blows had not sufficed to destroy the will to resist.

These are only hypotheses. They are in accord with the very spirit of the art of war—to destroy the live forces of the enemy as quickly as possible and, if there are several enemies, the most dangerous first. From the sole standpoint of theory this method would be the most logical and probably the most efficacious. It supposes, however, that the adverse bloc deliberately initiates an aggression and, worse still, the mass employment of the most powerful types of thermonuclear weapons.

For the time being, at least, so terrible a genocide does not belong to the list of probabilities for no problem dividing the two camps is sufficiently vital, crucial, imperious, or unsolvable to justify the employment of even a small atom bomb. To be sure there are tens of thousands of suffering human beings to be freed, but must we free them by death?

Let us stop for a moment again and ask ourselves the same question as before. Is there in this reasoning anything that implies the indisputable supremacy of one of the three types of armed forces or even, as some will have it, a semimonopoly on the part of one of them relegating the others to a secondary position?

To be sure, it is possible that on the basis of the hypothesis already announced, that the ground forces will not be the first to be engaged, that they will even remain inactive while the intercontinental aerial battle is being waged. Or, again, it is possible that the naval forces will have only a strictly defensive role at first, that of the protection of transportation over the sealanes. It may be admitted without any great fear of error that an order of urgency and primacy exists in the Western camp for the intervention of the three types of armed forces and that aviation is to win the first decision, that of the first round. The great difficulty is in knowing exactly how to proportion the aid given by the respective branches.

Moreover, this concern has application in the alliance only to the United States and Great Britain. For the other members the problem will be centered for a long time to come on large units of the conventional type, units which are too unwieldy and are no longer adapted to the conditions which we foresee for atomic war.

### Weaknesses

We see General Ridgway vigorously defending the American ground forces threatened with "amputations"; Field Marshal Montgomery declaring that the day of naval forces has passed; and quite frequently military personalities calmly state and repeat that the atomic weapon will unhesitatingly be used against certain targets. These sporadic reactions in the face of Soviet closemouthedness in these matters are not a favorable sign. They reveal the indecision of an allied "grand strategy" determined only on one of the three great fronts, Europe. Here we come to one of the great weaknesses of the system.

To get a better idea of it, let us attack the problem from a third angle.

Each of these fronts can be divided into a certain number of theaters of operation, that is to say, vast zones in point of breadth and depth with a certain degree of homogeneity from the geographic and strategic points of view.

On the Atlantic front we easily distinguish as separate theaters:

The Scandinavian Peninsula by way of which an assailant could get around the bottleneck of the Baltic straits, open them, reach the Atlantic coast, and there establish air and submarine bases.

The continental theater which is the geometric location of all the great wars of the past.

The Mediterranean theater is also divided into two zones, the one centered on Italy and French North Africa, the other on the Balkans and Turkey.

On the Pacific front there are Korea and Japan; continental China and Taiwan; and the Asiatic southeast.

We may conceive of combined operations occurring on one or the other of these theaters or on several simultaneously.

However, the traditional art of war finds it difficult to admit this. In the campaigns of the past in limited theaters it was easy to distinguish the principal maneuver from the diversions. The idea of a principal theater of operations and secondary ones has been retained as a heritage. This argument is often brandished in the name of Napoleonic verity.

The general and specific conditions of war have changed radically since the day of the meteoric career of the great captain. May we not examine the present-day problems without always being obliged to seek a strictly doctrinal connection with the past?

Logic, as well as the military geniuses, show that the most dangerous adversary must be conquered in a decisive fashion and must be brought down by blows aimed directly at his living forces in order to destroy them. In the past these were constituted exclusively by his ground forces. It is difficult to believe that in a third world war the 50 first-line divisions of NATO will be the main factor, the chief objective of the decisive offensive from the East, or that our advance beyond the Elbe will constitute the principal condition of our success.

The concept of theaters of operation has grown amazingly in complexity. There are the operational forces, the lines of communication, the bases and the ports, the aerial ground installations, industrial power, and the will of the country to defend itself. All of these juxtaposed or integrated factors call for, perhaps, an equal number of different, separate, but coordinated actions.

Geographically speaking, it would be difficult to affirm with certainty that, as in the past, Germany, the Netherlands, Belgium, the Grand Duchy, and France will become the main theater of operations. To be sure it would be tempting for an adversary with an initial relationship of 3 to 1, to break the cordon of the Western divisions, to annihilate the ground forces of the Western European Union, to sweep from the continent the American bases, to reach the Atlantic coasts, to install there submarine bases and batteries of rocket launchers, to succeed, in short, in repeating the German successes of 1940. However, the invader would also find all the difficulties of 1940-44 together with the certainty of active clandestine resistance.

As long as there is a possibility of resistance of even short duration on this conventional front, the assailant may hesitate. Let the absence of unity of views in our grand strategy result in a diminution of this feeble margin of security, either in the case of the ground or the naval forces, and the temptation may be strong. It must be maintained as a principle that nothing escapes the potential adversary. It seems almost as if our secret files were open before him. He is able, therefore, rapidly to adapt his general plans to any fluctuation of our means and obtain a leverage against our points of least resistance.

Admirably informed, he is well placed in a central position with the initial advantage conferred by the initiative in aggression. On each of the lines of strategic effort he might follow, the objectives are of a worthwhile nature; over these same lines, those of a hypothetical Western offensive are not.

A conventional offensive in the direction of the Rhine, the Baltic straits, and the open ports of maritime Europe, would permit the Eastern bloc to install itself at the gateways of Great Britain and of Spain, while our forces pushing toward the east would only be swallowed up between the Elbe and the Vistula.

An operation in the direction of the Bosporus, the Dardanelles, and Salonika across Thrace would bring the adversary to the shores of the Mediterranean from which his submarines and his aerial fleets would be able to cut the ties joining Europe to North Africa. This would probably be the hardest blow. If, on the other hand, we attacked Bulgaria and Romania, they would only be secondary operations of limited range.

An airborne offensive in conjunction with an armored army across the plateau of Iran toward the oilfields of the Persian Gulf would be a blow difficult to reconcile with the continued supply of our camp.

There are still possibilities of the Communist "oil slick's" spreading to Thailand, to Vietnam, to Malaysia, and perhaps to Indonesia. These are secondary theaters in the ensemble but decisive with respect

to Asia and their development could assume an unforeseen course. There, no more than in Korea, could the allied forces make more than a pinprick if only conventional weapons are used.

The sole effective retorts from the Western camp are well localized—on a world scale that is. In the event of a drive toward the Atlantic coast it must at least retain complete control of the allied countries on the Mediterranean, from Portugal to Turkey, for it is from this zone that it could stage a liberating offensive against the "soft underbelly" of Europe, against the cordon of so-called satellite countries whose will to resist might be broken from within. It is the sole point where operations of the traditional type could be applied. We must also consider strategic atomic attacks against the oilfields of the Caucasus from Mediterranean bases and still more ambitious ones against the industrial regions of central and eastern Siberia from Arctic bases.

### Conclusion

The extreme variability of the factors of the present moment makes doctrinal principles extremely weak when rigidly interpreted. Concentration of forces? Where? At what point on the immense periphery? Where should we realize it; on our western promontory? Somewhere around the Mediterranean?

Freedom of action? As variegated a coalition is doomed to be surprised by the first attack. However, it must survive and then react immediately. Hence it must possess mobile reserves for this purpose. What is the proper proportioning of means to the end and of ends to the means? The means are known. The experience of these years of effort shows that they are not easily extended—at least not to begin with. Again, and most important, we must not succumb to the blow.

Economy of forces? Certainly, we must have the wisdom to abandon in time the theaters, zones, or sectors of operation temporarily undefendable, and to set "back fires" in sufficient time so we can pull back our ground, naval, and air forces stationed there and join them with our other forces before the main blow falls. However, in the present political and strategic situation of a world scale who will make the decision? And is one not risking being defeated piecemeal if forces are dispersed?

All these uncertainties do not prevent us from placing a few of our most valuable "pieces." In western Europe there would be 25 or 26 first-line divisions and about 28 in Mediterranean Europe subordinate to NATO. These would be supplemented by strong airbases on the continent, depots, and organized communication lines. There is also a second peripheral belt consisting of Iceland, Great Britain, the Iberian Peninsula, French North Africa, Libya, Malta, Cyprus, the entrenched camp formed by Turkey, the axis Turkey-Iraq, and the bases of Pakistan. On the southern Asiatic front progress is halted by the neutrality of the inhabitants of Colombo. In the Asiatic southeast the signing of the SEATO agreement unites only countries of rather limited potentials against the background of American power.

In order to be able to react with force and rapidity at points on the globe where their interests would be threatened, the United States depends on permanent task forces of variable composition including naval units of various types, aircraft carriers, and landing units, thus combining ground, naval, and aerial means probably aided by atomic and other weapons. The Sixth Fleet in the Mediterranean and the Seventh Fleet, charged with the mission of guaranteeing the security of Taiwan, are special forces possessing both speed and strength for use in a local action. It is also quite possible that other task forces are earmarked for the transporta-

tion of other forces located within effective striking distance of weapons for atomic attacks.

The United States, the leading nuclear nation of the maritime alliance, possesses no territorial hold on the continent and seeks to overcome this by the development of powerful long-range strategic aviation. Everything else derives from this. This power has adopted the policy of fixed peripheral bases as close as possible to the industrial objectives of eastern Russia, Soviet Asia, and Manchuria; her floating bases constituted by certain of her "task forces"; and her plan of immediate reprisals by means of thermonuclear weapons with the frightful risks which it involves. Orientation in the United States is influenced by the American specialists in air-naval warfare in the direction of a type of strategy which, without being entirely of the "pushbutton" type, resembles it by virtue of its transcontinental character and its methods. The fact that the Pentagon—although considerably divided in its views—tends to lean more and more toward the aerial arm alone and particularly strategic bombardment is not hard to understand, although regrettable. SHAPE, on the other hand, has its eyes fixed on European realities only and persists in more conventional views. The military critics of our countries [Benelux] are governed by the same law and see the problem in its immediate and Western, not global, aspect. They examine the influences of the atomic weapon on the organization of the large ground units which are urgently in need of revision; the modernization necessary for heavy armament, particularly tanks which are already outmoded; and the necessity for combining dispersion of forces with speed of concentration for action.

Each is right from the standpoint of a particular front but only a simultaneous examination of the strategic problems of the entire world can lead to the logical conclusion—there cannot be any solution in which certain fronts are excluded; there must be a flexible adaptation to the characteristics and necessities of each great field of battle and the capabilities of each adversary.

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# Soviet Armored Formations

**Digested by the MILITARY REVIEW from an article by R. M. Ogorkiewicz in "The Army Quarterly" (Great Britain) October 1955.**

AT A TIME when changing conditions raise the issue of future army organization, it is of particular interest to consider the developments which have taken place in other armies. This applies especially to the Soviet Army and its main striking force of armored formations. Admittedly, reliable information on the subject is not overabundant, but there is enough, even in published material, to form a fairly clear picture of the main trends in the organization of these formations.

The development of the Soviet armored formations dates back to the early thirties. It was then that, as part of the large-scale program of industrialization and civilian and military mechanization, the Soviet Union began to build her tank strength. It was then, also, that her first armored formations came into being.

Apart from the relatively large-scale tank production, there were two other important aspects to the contemporary background, namely two diametrically opposed theories on the use of tanks. One, and the older of the two, was the concept of the limited employment of tanks in the role of a subordinate auxiliary to the infantry. Of this the French Army was then the chief exponent, although the the-

ory was also widely accepted elsewhere. In deference to it the Soviets allotted one light tank battalion to each regular infantry division, and for a few years there was even one tankette battalion to each frontier infantry regiment. Tank brigades of light and medium-heavy tanks were also created for infantry support at the higher level of corps or army.

The other of the two contemporary theories was that first advanced by a handful of British pioneers of the more independent and mobile employment of tanks. They visualized them either in the role of mechanized cavalry or, ultimately, of an all-tank field force, and strove toward this end in the experiments carried out, within the limits of the available resources, on Salisbury Plain.

The more revolutionary aspects of this theory were bound to appeal to some of the Soviet doctrinaires, and being able to afford the luxury of masses of tanks the Soviet Army was able to subscribe to it, as well as to the more conservative theory. Thus in addition to the other armored units it formed independent mechanized brigades whose role became that of mechanized strategic cavalry. In this they resembled the tank brigade of the Royal Tank Corps, and they followed closely the "all-tank" principles which dominated at the time British ideas on the organization of armored formations. In other words, Soviet mechanized brigades consisted largely of tanks, usually three battalions of the fast, Christie type *BT* tanks, to which was added a small infantry-automatic weapons element and auxiliary units.

In the tracks of the mechanized brigades higher armored formations, called mechanized corps, were also formed—as early as 1932, according to some Soviet statements. The corps embraced 2 or 3 mechanized brigades, each with its 100-odd tanks, together with a motorized infantry brigade and a rather large motorized field artillery regiment. In this form the mechanized corps bore some resemblance to the contemporary German ideas on the organization of armored formations, which were eventually adopted in all armored divisions. The Soviet mechanized corps, however, was never the versatile, closely integrated fighting formation of tanks, infantry, and artillery which the Panzer Division was, and the mechanized brigade, with its preponderance of tanks and its accent on the cavalry role, was more typical of Soviet ideas on the organization and employment of armored formations.

The relative importance of the mechanized corps—of which there were seven by the end of the decade—was further weakened by the doubts which the Soviet Command began to share with others on the eve of World War II. By then it had lost some of its faith in large armored formations and, just as the British Army planned to devote more tank production to infantry tanks, the Soviet Army shifted its emphasis to small tank units and infantry support.

### Reorganization

It was only after the success of the German Panzer Divisions in Poland and in France, in 1939 and 1940, that the Soviet Command recognized the error of its ways. The position had to be reconsidered hurriedly, and the upshot of it was a far-reaching program of reorganization, with the emphasis on armored divisions modeled after the German pattern.

The new armored, or tank, division established in 1940 consisted of 2 tank regiments, with a total of some 400 *BTs* and the new *T-34* medium and *KV* heavy tanks, 1 motorized infantry regiment, and 1 artillery regiment. Two tank divisions and a motorized infantry division formed a tank corps, the motorized division being similar in its organization to the tank division but with ratio of tank to infantry units reversed.

Never parsimonious where tank were

concerned and spurred on by the specter of German tank strength, the Soviet Command planned to have 20 tank corps, or 40 to 50 tank divisions, by the autumn of 1941. These, however, never materialized as planned, for the German attack caught the Soviet Army still in the throes of reorganization. A year earlier, at the time of the Finnish Campaign, Soviet armor was still organized into mechanized corps and brigades, as well as heavy and medium tank brigades, and in 1941 the tank divisions were only just coming into being.

Apart from anything else, the figure of 40 or 50 tank divisions which were planned serves to emphasize the strength of Soviet armored forces, and with the 20-odd thousand tanks which they then possessed makes ridiculous the contemporary German estimate of the total Soviet strength at 46 armored brigades.

Nevertheless, ignorant as they were on the eve of Operation *Barbarossa* of the Soviet tank strength, of the new divisional and corps organization, and of the new *T-34* and *KV* tanks, the Germans managed to destroy practically all of the Soviet armored forces arrayed against them. In this they were undoubtedly helped by the hurried organization of the new Soviet armored formations, as well as by the legacy of the inferior, infantry support and the inept operational handling of their armored forces by the Soviet commanders.

### Wartime Reconstruction

The magnitude of the German success is perhaps best shown by the fact that by the end of the first campaign, in the winter of 1941, the German High Command had identified 35 Soviet tank divisions destroyed in action and a further 30 disbanded as a result of heavy losses. At the time there were virtually no Soviet armored units of larger than battalion size left.

The exhaustion of the German forces and the stabilization of the Eastern Front in the winter of 1941-42 gave the Soviet Command a chance to raise more armored formations, from units left in the interior of the country and the equipment coming from the Ural factories unaffected by the German invasion.

The new formations, however, were of an entirely different type from their immediate predecessors and represented, in fact, a return to the earlier brigade basis. No doubt Soviet commanders were much more capable of handling brigades than the larger and more complicated armored divisions, and brigades, of course, were more in keeping with the much reduced tank resources.

The new tank brigade, as at first reported, had a tank regiment with three small, mixed tank battalions, a motorized infantry machinegun battalion, a company each of antitank guns and mortars, and small reconnaissance and antiaircraft units. However, most of the brigades used in 1942 and 1943 were considerably smaller with only two tank battalions of 23 tanks each, a motorized rifle battalion, and some smaller supporting units.

It was only in 1944 that the tank strength of the brigades began to rise to a more respectable level. The brigades of that period had either three battalions, each with two 10-tank companies, or two battalions, each with three companies, in either case representing a total of 65 *T-34* medium tanks. By then the infantry unit had assumed the novel form of a submachinegun battalion.

The operational capabilities of such small formations as the Soviet tank brigades were extremely limited, and there was little option but to use them for some time in the limited, infantry-support manner. But as time went on their numbers grew: in the late spring of 1942 about 14 tank brigades were used during the abortive Soviet Kharkov counteroffensive. In 1943 the Germans estimated Soviet strength at 138 brigades, and by the end

of the war they had identified no less than 258 different tank brigades, including 49 of the "Guards."

What they lacked in individual strength and quality, the Soviet tank brigades thus partly made up in quantity. The limited operational capabilities of the individual brigades were further made up by grouping them in larger armored formations, the so-called tank and mechanized corps and tank armies. The first corps appeared in action in the autumn of 1942, during the Stalingrad operations, and marked the beginning of a process of differentiation between the independent brigades which were retained for infantry support and those grouped within the framework of corps for more mobile operations.

The actual composition of the tank corps varied considerably, but generally it was based on 3 tank brigades and 1 motorized rifle brigade. At maximum strength, in addition to these the corps also had 1 reconnaissance and 1 motorcycle battalion, 1 or 2 heavy tank battalions, 2 assault gun and 2 towed antitank regiments, and a regiment each of antiaircraft guns, mortars, and rocket projectors. With all these units and a maximum strength of about 300 tanks, the tank corps corresponded roughly to a Western armored division.

The mechanized corps, on the other hand, was basically a motorized infantry formation somewhat similar in principle to the German Panzer Grenadier Divisions. In other words, it provided the infantry followup force for the tank corps, which the ordinary infantry formations with their horse-drawn vehicles were unable to provide. The organization of the mechanized corps resembled that of the tank corps, but with the ratio of tanks to infantry reversed—with 3 motorized infantry brigades, each with its own tank battalion, and 1 tank brigade.

The independent tank brigades were generally similar to those in the tank and mechanized corps, and like the latter were chiefly based on the *T-34* medium tanks, there being a maximum of 107 of these per brigade. However, being principally intended for cooperation with the infantry, they did not have organic infantry units. Apart from these brigades there were also independent heavy tank regiments, with 23 heavy *KV* or *JS* (*Stalin*) tanks each, and independent assault gun or *SU* regiments, which were allotted as required for the support of infantry or armored formations.

### Postwar Developments

By the end of the war Soviet armored forces thus consisted of the following four categories: the tank corps, the mechanized corps, the independent tank brigades, and the independent heavy tank and assault gun regiments.

According to some German estimates there were 25 tank and 13 mechanized corps at the end of the war in Europe, representing over one-half of the total Soviet tank strength in the field. Powerful as this force was, it was still small in relation to the mass of the Soviet infantry formations. It also represented a much smaller over-all degree of mechanization than that in the armies of the Western Allies, who finished the war with about 25 armored divisions, or even the German. The latter made the most of its tanks by grouping practically all of them in armored formations, and at their peak in 1944 there were 25 Army and 8 *Waffen-SS* Panzer Divisions.

Also unlike the German, the Soviet operational doctrine was still inclined toward tying tanks down to the pace of the infantry mass. But the increasingly successful employment of armored forces in more independent roles in the closing stages of the war encouraged Soviet protagonists of armor as the mobile spearhead of the land forces.

In the immediate postwar period Soviet

armored forces had to face the additional problem of doubts raised about their future by various new developments in armor-piercing weapons and other fields. In this they were no different from other armored forces. Unlike the Americans, for instance, who found their strength reduced from 16 to 1 armored division, the Soviet armored forces emerged in the postwar period not only undiminished in number but, in fact, occupying a far more important position than ever before. Published estimates of the Soviet postwar strength vary, which is only to be expected, but there seems little doubt that armored formations represent about one-third of the Soviet field forces and their most effective, versatile, and mobile striking force.

To fit them for this new role the organization of the Soviet armored formations was very thoroughly overhauled, and they have changed considerably from their wartime predecessors. Divisions have once again been introduced. For instance, shortly after the war they replaced brigades as the basic armored formations and, also, the rather loose corps organization.

As in the case of the earlier divisions and the wartime corps, there are still two types: the tank division with a relatively high proportion of tanks, and the mechanized division with a preponderance of infantry. The basis of the former are 3 medium tank regiments with tanks of the *T-34* type, 1 heavy tank-assault gun regiment with *Stalin* tanks, and 1 rifle regiment. The four tank regiments represent a total of about 300 tanks and *SUs*, and the other units of the division include a towed 122-mm howitzer regiment, a light antiaircraft regiment, and a regiment each of heavy mortars and rocket projectors; there is also a reconnaissance battalion and the usual divisional service units.

The organization of the mechanized division is similar to that of the tank division but with the position of the medium tank and rifle regiments interchanged. Broadly speaking, the division stands in much the same relative position to the tank division as the motorized division did to the tank division in 1940, and as the mechanized corps did to the tank corps during the war.

The need for it is, however, slightly less clear than that for its predecessors, in view of the increasing motorization of regular Soviet infantry divisions which have now dispensed with horse-drawn vehicles. The infantry divisions have also, once again, acquired their own organic tank units, usually in the shape of a regiment of medium tanks with some *SU* assault-gun type vehicles. The new infantry or rifle divisions thus show that the Soviets have not abandoned the idea of using a portion of their tank strength for infantry support, but in view of the large number of tanks at their disposal this diversion detracts but little from the strength of the armored formations.

### Existing Formations

It is quite possible that the existence of the two types of Soviet armored formations is only an interim measure and that the two will eventually merge into one, especially as the rifle formations acquire still more motor transport. But even now, in spite of the different proportions of riflemen and tanks, tank and mechanized divisions are very similar.

In principle they are both closely integrated formations of tanks and infantry with considerable fighting power. In this last respect, demonstrated clearly by the inclusion of heavy tanks and powerful assault guns, they are in line with German ideas on the subject and well away from the once popular principles of undergunned mobility.

In trying to assess Soviet formations from other points of view allowances must be made for the smaller size of some So-

viet units and for differences in terminology. For instance, a Soviet tank battalion has only 21 tanks, and a 3-battalion regiment is not much bigger, therefore, than a Western tank battalion. The rifle battalions, too, are smaller. Thus although the number of units is different, the effective, over-all ratio of tanks to infantry in the Soviet tank divisions is not very much different from that represented by the 1 tank battalion to 1 infantry battalion ratio considered desirable, or actually adopted, in British and American armored divisions.

In the mechanized divisions the proportion of infantry is, of course, higher—about double that in the tank divisions. At that it is similar to the proportion of the two elements with which the German Panzer Divisions operated during the latter part of the war, although as a result of shortages of tanks rather than design.

In the case of both the tank and mechanized divisions, however, the degree of integration between tanks and riflemen is close, probably closer and more permanent than has been the case anywhere else so far. The inclusion of the submachinegun battalion in each medium and heavy tank regiment is somewhat similar to the British practice of having a motor battalion in each armored brigade. But, in view of the smaller size of Soviet tank units, it represents a much higher proportion of infantry within the armored units and a closer tieup between the two. Similarly, a close degree of integration is met within the mechanized divisions where each rifle regiment has an organic medium tank battalion, the latter being additional to the divisional medium and heavy tank regiments.

Apart from their organic infantry battalions, tank regiments have their own assault guns, and rifle regiments have their guns, mortars, and other heavy weapons. With all these means at their disposal the regiments form fairly self-contained battle groups, and each division can thus readily operate in 4 or 5 such groups, in line with all the latest trends in tactical employment. The permanent existence of such regimental battle groups also shows that Soviet divisions have definitely advanced beyond the earlier system of organizing armored formations by the addition of an infantry brigade to a tank brigade.

In other respects, Soviet divisions seem able to dispense with some of the paraphernalia found in other armored formations. This lightens their entire structure and contributes to their smaller size, although admittedly some of it must be ascribed simply to lack of suitable equipment. Infantry carriers, for instance, have been very rare and the type in use is not much better than an armor-plated truck. Against this, on the credit side, one must put the diesel engines used in all the larger armored vehicles and the resulting fuel economy and operating range, and the availability of the powerful and versatile assault guns, such as the *SU-100* and the *JSU-152*.

Among criticisms one might also include some of the unnecessary variety in the organization of subordinate units and the apparently large number of junior commanders. Taken as a whole, however, the organization of Soviet armored formations reflects the sound lessons of experience and up-to-date development. First, there is the accent on fighting power and on well-armed fighting vehicles, born out of the hard school of the Eastern Front and its armored battles. Then there is the close integration of tanks and the supporting riflemen, developed gradually from the days of the original mechanized brigades. Finally, there is the smaller size of the divisions and their self-contained regimental battle groups which were born out of wartime necessity and brought up it seems on a sound assessment of future needs and conditions.

# Problems of Disarmament

**Digested by the MILITARY REVIEW from an article by Air Marshal Sir Robert Saundby in "The Aeroplane" (Great Britain) 25 November 1955.**

THE partial relaxation of tension brought about by the meeting between the heads of government at Geneva rekindled hopes of a more successful approach to the intractable problems of disarmament. The so-called Geneva spirit has been shrewdly exploited by the Soviet leaders, although at the time of writing it seems to be evaporating fairly rapidly as the four Foreign Ministers tackle the practical problems of German reunification and European security. But if progress cannot be made in dealing with these questions because the Soviets will accept no solution which does not enable them to extend Communist domination and the Iron Curtain westward to the Rhine, this will serve to focus attention on the second item on the Foreign Ministers' agenda—the problem of disarmament.

All the evidence goes to show that the Geneva spirit is the fruit of a change of Soviet tactics, not of Soviet policy. If we analyze the reasons for the improved international climate, we find that the Soviets have made no concessions which have any vital, or even important, bearing on their known policies. What they have done is to reduce, or in some cases to stop, the flow of lying and abusive propaganda that has streamed from the Kremlin for years; to release Western prisoners who should never, under any civilized judicial system, have been imprisoned; to arrange cocktail parties and other social functions, combined with an improvement in their diplomatic manners; and to make, or purport to make, some reductions in their conventional armed forces, already monstrously oversized. If, however, they are genuinely going to allow a much freer interchange of visits on either side of the Iron Curtain, it can do nothing but good.

Public support for the decision to put our defenses in order—both in America and in this country—had as much to do with our indignation at the uncivilized and unfair conduct of the Communists, as with our fear of their worldwide pressure against our vital interests, of their encouragement of subversion at home and abroad, or even of full-scale aggression. We resented the rude and insulting behavior of the Soviet leaders and their press; we found it hard to bear their false accusations against our way of life, and their wicked misrepresentations of our sincere attempts to serve the cause of world peace and justice.

The British have always loathed the necessity of providing even the barest minimum of armed forces in time of peace, and the least sign of relaxation in international tension is eagerly seized upon by many sections of our population as an excuse to disarm. Even before the Prime Minister had returned from Geneva, more than 50 members of Parliament had put down a motion to reduce the period of National Service to 1 year. And since then there have been many speeches and letters to the press urging that the time is now ripe for a reduction of our armaments, and some even suggesting that military research and development, and the improvement of the efficiency of our armed forces, are contrary to the Geneva spirit.

There is thus a grave danger that we may approach the problems of disarmament in too optimistic a frame of mind, hoping—as we did 35 years ago—that unilateral disarmament and concessions will be matched by similar actions on the part of others, and forgetting that, if the Communists are now behaving better than they were, it is the direct result of our pol-

icy of strength. To abandon that policy now, just when it is beginning to show results, in the belief that the Communists have undergone a real change of heart and mind, would be completely disastrous.

Nevertheless, an annual expenditure of nearly 1,500 million pounds on defense is a tremendous burden, and it is no doubt a partial cause of our economic difficulties. The inflationary pressure which is causing the cost of living to rise and bringing so much hardship to those trying to live on pensions and savings is not only due to the recent increases in the level of wages, but stems at least in part from the high rate of Government expenditure. There is thus a strong case for doing everything we possibly can, without weakening our position in relation to the Communist bloc, to reduce the cost of defense. And there is, in addition, a powerful psychological argument in favor of a reduction of armaments. There is no doubt that much of our modern apathy and selfishness, the lack of pride in work well done—the "couldn't care less" attitude that is undermining our national character—is due to a deep-rooted feeling of insecurity. Any progress in the direction of disarmament by agreement would help to remove this feeling.

### Discussion Unending

For nearly 10 years the Disarmament Commission of the United Nations has endlessly discussed every aspect of disarmament and considered every possibility, while at the same time armaments have piled up on either side of the Iron Curtain, and large numbers of the world's leading scientists have been engaged in designing ever more powerful engines of destruction. For reasons which are sufficiently obvious, the Soviets have always pressed for the total abolition of nuclear and thermonuclear weapons, and for the destruction of all existing stocks. Such a step could do a very great deal to restore a sense of security among the nations, provided—and this is of vital importance—that two conditions are fulfilled. In the first place the system of control and inspection, to ensure that all existing weapons have been destroyed and that no more were being made, must be truly effective. It must be not only foolproof, but knaveproof. It certainly cannot be made the responsibility of the Security Council, as the Soviets propose, because any action the council might wish to take to investigate or punish violations of the agreement could be vetoed by the Soviet Union. And secondly, the abolition of weapons of mass destruction must be conditional upon the achievement of a satisfactory reduction and control of conventional forces. If this were not done, the Soviet Union and China, with their immense resources of disciplined manpower, would possess land forces that the free world could never hope to match. With our airpower shorn of its decisive weapon and our seapower totally ineffective against the vast land masses of the Communist world, their armies would be invincible.

On 19 April 1955, at the Disarmament Conference held at Lancaster House, the Western Powers made another effort to end the deadlock. They suggested that the Armed Forces of the United States, the Soviet Union, and Communist China should be limited to 1 million or 1.5 million men, and those of France and Great Britain to 650,000. We also proposed that existing stocks of nuclear and thermonuclear weapons should be destroyed as soon as all conventional forces had been reduced to the agreed limits. The Soviets rejected these proposals, but on 11 May they produced a plan of their own, which was for all practical purposes an acceptance of our general ideas, but which also provided for the dismantling of all foreign bases in the territories of other countries, and stipulated that the forces of all other states should not exceed 150,000 to 200,000 men. This would, of course, have meant

the withdrawal of all United States air and other forces in Great Britain, Europe, and North Africa, and would have ruled out most of the 12 West German divisions provided for in the Paris agreements.

No progress could be made along these lines, and, indeed, we cannot go far along the road toward disarmament without coming up against the crucial question of reciprocal inspection and control. It is just possible to imagine a system acceptable to sovereign powers in the present state of the world, under which no nation could greatly exceed the number of divisions, warships, and aircraft to which it had agreed to limit itself without the facts becoming known. But even here the possibilities of ingenious evasion, concealment, and polite obstruction, as we know from the failure of the Inter-Allied Commission of Control in Germany after World War I, are very great.

### Problem of Knaveproof Solution

When, however, we come to the question of a knaveproof system of inspection and control, sufficiently reliable to induce the NATO powers to abandon the production of nuclear weapons and destroy all their stocks, we find a problem of appalling complexity. The possibilities for hiding away stocks of nuclear weapons, and secretly diverting fissionable materials to their illicit manufacture, are simply endless. It would be necessary for the agents of the Control Commission to be free to go anywhere they chose, at any time, without prior warning, into private houses as well as factories and military establishments, and to be allowed to see literally anything and everything. Nothing less than this could be a guarantee against bad faith, and even these wide powers might, in such vast areas as the Soviet Union and China, fail to uncover a fraud.

It is difficult, if not impossible, to imagine the United States or Great Britain agreeing to such a fundamental modification of their democratic constitutions, which would mean giving to foreigners powers consistently denied to their own police and security services. And it is even harder to believe that the Soviets would consider it for a moment.

Sir George Thomson, who was Scientific Advisor to the [British] Air Ministry during the latter part of the last war, and later advisor on atomic questions to the British Delegation to the United Nations, believes that if the Baruch plan for the international control of the production of fissionable materials, put forward by the United States in 1946, had been universally accepted, it would have worked. There was very little uranium available at that time, and international control of production could, he thinks, have ensured that all fissionable material produced would have been used in accordance with international agreement. The Soviet Union unfortunately rejected the plan and the opportunity was lost. Sir George Thomson takes the view that nowadays so great a number of bombs of the uranium-plutonium type are in existence that it would be entirely impossible to ensure that considerable stocks were not hidden away, and even increased, until the time came to use them to back some major act of aggression. It would not be possible to detect the conversion of atom bombs to hydrogen bombs.

Must we conclude, therefore, that the opportunity has been missed, and that the problem is now insoluble? I am afraid that it is only too clear that this is the position, and that there is now no practicable means of ensuring the genuine abolition from the world's armories of these appalling weapons of mass destruction.

### When Aggression Is Lunacy

This does not mean, however, that sooner or later they are bound to be used. We have now reached the stage at which recourse to a global war would unleash such terrible forces of destruction that very little of man's handiwork for the past

thousand years would survive, and much of our green earth would be turned into a radioactive desert. Mankind would survive the holocaust, and would painfully begin to build anew. But such a war would be a disaster of the first magnitude for all of humanity. The nation that began it could not hope to gain anything from it, but would share in the general ruin and destruction.

Aggressive war on the grand scale has always been wicked and often foolish, as in 1914 and 1939, but now it is seen to be sheer lunacy. War, global war, can never again be made to pay, and I think that there is evidence that the Communist leaders have come to recognize this truth. There is now a fairly wide acceptance of the hypothesis that so long as both sides have nuclear and thermonuclear weapons and will not hesitate to use them if attacked, global war is unthinkable.

There is, however, one exception. Full-scale war may be lunacy, but that fact would not deter a lunatic from resorting to it. No restraints based on reason will apply to lunatics, and we know that totalitarian regimes tend to allow lunatics to reach the highest offices of state. But even dictators have colleagues, some of whom are likely to be sane, and the danger, although it cannot be ruled out, is not in my view very real.

Because the suppression of weapons of mass destruction poses an insoluble problem, and the control and inspection of conventional forces a very difficult one, the Western Powers tried a different approach to the problem. President Eisenhower proposed that the NATO countries and the Communist bloc should exchange full information as to the size and disposition of their armed forces, and each permit the other full rights of air reconnaissance over their respective territories. Sir Anthony Eden suggested that, within a specified zone laying on either side of the Iron Curtain, arrangements should be made for reciprocal military inspection, and that this zone should be largely demilitarized.

Neither of these proposals is, in a strict sense, concerned with disarmament, but both are designed to increase the sense of security by minimizing the possibility of surprise attack by land forces. They do not, by themselves, guard against the possibility of sudden full-scale air attack with nuclear weapons, but it has been argued that no nation would resort to this without arranging to follow up such an attack on the ground. It is questionable to what extent one can rely on this, which is no doubt a matter of opinion.

It is probably true that President Eisenhower's plan is too far-reaching for present-day conditions, but I feel sure that we should try very hard to get agreement on the lines of the Eden plan. If we are ever going to make any progress in disarmament with safeguards, we must begin to get used to the idea of international inspection of armaments, at least in certain specified areas. No nation which is not planning aggression has anything to lose by such an arrangement.

### A Valuable First Step

Limited in scope though the Eden plan may be, it can be regarded as a valuable first step, which in time might lead to an extension of its principles, and which could cover the period during which agreed reductions in conventional armaments were carried out.

Since weapons of mass destruction cannot be abolished until civilization has reached the stage at which full-scale war, at least, is regarded as an absurdity, we are left with the possibilities of an agreed reduction in conventional weapons, and of the institution of buffer zones, largely demilitarized and open to mutual inspection. It is along these lines, and especially in the creation of buffer zones, that we may legitimately hope for some degree of success.

It has often been said that pacification must precede disarmament, and it is obviously true that it is very difficult to achieve any genuine progress in disarmament in a time of serious international tension, caused by the conflicting policies of the great powers. If the Communist empires would really give up their policy of seeking, by every means in their power, to impose their totalitarian system on the rest of the world, or if the free nations would give up their struggle to remain free, it would not be difficult to agree on a large reduction of armed forces. But there is no sign that Communist policy has altered in any way, and I hope that the free world will never lose its faith and its courage, and allow its peoples to sink into the new slavery. We have to accept the fact that international tension will be the normal state of the world for a long time to come, and that the solemn pledges of totalitarian governments are not worth the paper on which they are written. Within that framework we must try to make it ever more difficult and more costly to resort to war, and at the same time to reduce the financial burden of defense which today is warping the economy of almost every nation in the world.

We cannot afford just to let things slide and hope for the best. The problem presses, because in the future, not so very far away, we can see the era of guided rocket-driven missiles, carrying nuclear or even thermonuclear warheads, and having an intercontinental range. We do not know what temptations to an aggressor nation these new developments may bring, especially if that nation should achieve a scientific and technical lead over its rivals.

It is too much to expect spectacular results, but every step in the right direction will bring nearer the day when mankind will emerge from the dark shadow cast by the image of modern war.

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# Future Employment of Airborne Forces

**Digested by the MILITARY REVIEW from an article by "Romulus" in the "Journal of the Royal United Service Institution" (Great Britain) May 1955.**

IT IS DOUBTFUL if there has been very much objective thought since the end of World War II on the employment of airborne forces in any future war. In spite of considerable progress in and development of airborne technique and equipment, present-day airborne doctrine remains based squarely on the experience gained from airborne operations undertaken in World War II.

The entire British Army is now actively engaged in studying the implications of atomic warfare as they are likely to affect our current tactical methods, organization, and equipment. It may not, therefore, be inopportune to consider the scope for the future employment of airborne forces against this same background, although this background is, as yet, by no means very clear or sharply defined.

It is probably true to say that there are at present two distinct and opposed schools of service thought on this subject.

One school of thought maintains that the air situation likely to prevail in another major war precludes the possibility of employing airborne forces until the air war has been won. Thereafter, they argue that provision and maintenance of suitable transport aircraft in the numbers necessary to lift an airborne force of a size that can exert any real influence on the course of events is beyond our national resources both in peace and in war.

Their conclusions, stated simply, are that:

1. It will not be possible to use airborne forces in worthwhile numbers until the final stages of a war.

2. They are extremely expensive to maintain and, in view of the above, we are not justified in maintaining airborne forces, except possibly in small numbers for use in local wars or in police operations.

The other, opposed, school of thought argues from different premises. They contend that air superiority, as we knew it in World War II, is a thing of the past; that the air situation is likely to remain extremely fluid as long as both contestants are capable of carrying out atomic attacks on each other; that as a result air superiority is likely to change hands rapidly and frequently in direct relation to the success of atomic attack on airfields and connected installations; that provided the necessary atomic and air effort is applied, it will always be possible to achieve a local and temporary air situation which will allow airborne operations to be executed; and, finally, that it will be possible, by using atomics, to achieve the necessary air situation more rapidly and with far less expenditure of air effort than was possible with the conventional methods of World War II.

From there they go on to emphasize that we shall not be required to fight another major war relying solely on our own national resources. We shall fight as a member of NATO, where in furtherance of NATO plans it is not unreasonable to assume that there will be some pooling of the military resources of the member states. In that case the airlift for a British airborne force to be employed on a NATO mission could and would undoubtedly be provided from United States Air Force resources. The fact that British airborne forces are trained to operate with United States Air Force transport formations may lend some weight to this argument. They complete their arguments with a claim that airborne forces are the ideal complement to atomic weapons in that they provide the obvious most effective followup to atomic attacks whether on tactical or strategic targets.

The truth, as is usual in such cases, probably lies somewhere between the extreme claims of these conflicting schools of thought.

If, however, we are to reach any balanced and worthwhile conclusions, we must go a little deeper into these arguments. To do so it is essential to appreciate the principal attributes and disabilities of airborne forces as organized and equipped today.

### Attributes and Disabilities

The main attribute of airborne forces is their ability to achieve *surprise*, a principle of war not fully appreciated by the British, if we accept the criticisms of some of the most redoubtable of our late opponents, the Germans. This ability to achieve surprise stems, of course, directly from their extreme strategic mobility.

There can be little doubt that the great range, speed, and capacity of modern transport aircraft and the flexibility of air forces means that airborne forces can be used to strike hard and without warning at the most vital spots in an enemy's military anatomy, with few geographical limitations as to the selection of the target. Moreover, if such operations are planned with due regard to secrecy, the actual target can remain undisclosed until the very last moment, so making effective enemy counterpreparations very difficult, if not impossible.

On the debit side of the balance sheet, airborne forces suffer certain inherent disabilities that restrict the scope of their employment.

First, airborne operations require certain minimum conditions of weather, and whatever progress the Royal Air Force

may make in all-weather flying, these minimum conditions are likely to remain necessary for airborne operations. Large numbers of aircraft taking off from perhaps 10 or 12 different airfields must be marshalled, when airborne, into the correct tactical order and thereafter must navigate and fly accurately, in close formation, to a margin of error of seconds and yards in time and space.

The individual parachutist cannot be dropped, without a disproportionate casualty rate, in surface wind speeds greatly in excess of 20 knots. It is, therefore, not possible to guarantee airborne operations; that is, it may not always be possible for airborne operations to take place at the time ordained. When, as is usual, airborne operations are an integral part of a major ground plan, this is a very serious matter and may create the most complex problems for both army and air force commanders and staffs.

The second major disability is the time required to mount an airborne operation. A great deal of very detailed joint army-air force planning and executive staff work is necessary, and it is a fact that the time required increases in direct ratio to the size of the force. Thus while it may be possible to mount a brigade group operation in about 72 hours, it may take 5 days to mount an operation on the divisional scale. As a result there is a considerable timelag between the concept of using an airborne force and the execution of the operation. This seriously restricts the use of airborne forces in fluid or fast moving operations, or on targets of opportunity, generally.

As the use of atomic weapons is likely to create just such fluid and fast changing situations, it is obvious that this timelag must be reduced if airborne forces are to play a worthwhile role in the future, and are to pay dividends in any way commensurate with the national capital invested in them.

It is an unpalatable fact that the complex and detailed arrangements necessary to prepare heavy equipment for parachuting may tend to increase this timelag. Simplicity in the procedure involved and in the equipment provided is absolutely essential to avoid increased delay.

Finally, there are certain minor tactical disabilities, mainly due to limitations in the number and size of heavy weapons and vehicles which can be parachuted.

When it appears likely that streamlining of the infantry in regard to weapons and vehicles will be necessary, these limitations cease to have any particular significance and parachute forces are unlikely to suffer the same comparative disability with normal ground forces as has been the case in the past.

### Tactical Employment

It would probably be both unwise and unrealistic to assume now that a future atomic war could be fought and won entirely on the use of such weapons. Land fighting will probably still be a necessary adjunct of atomic warfare, both to exploit or consolidate atomic gains, or to prevent the enemy from doing so. In exploiting or consolidating successful atomic attack, speed in the followup will be all important and it may be that airborne forces will constitute the ideal followup.

They can be dropped a matter of minutes after any air burst attack, and in the case of ground burst attacks, airborne forces can be dropped so as to avoid areas of radioactive contamination and great destruction, either of which might complicate and delay a followup by ground forces. It also seems inevitable that the general pattern of future tactics will be designed to maneuver the enemy into a degree of concentration, which will present a suitable target for atomic attack, while avoiding similar concentration oneself.

If that is correct, the bold and skillful use of airborne forces to this end has ob-

vious possibilities. Airborne forces could be dropped on defiles with the object of creating vulnerable "logjams" of both operational and administrative troops, in either advance or retreat.

By seizing ground which is vital to the enemy, it may be possible to make him concentrate prior to putting in a properly organized attack to regain it, and so render himself vulnerable to atomic attack in the process. In operations of this type, well-planned atomic support for the airborne force employed should allow it to exert an influence greatly in excess of its numerical strength. It should allow bolder operations than have been possible in the past, where the comparative lack of both punch and staying power of airborne forces has always been a limiting factor.

Finally, when lines of communication are destroyed or disrupted by enemy atomic attack, the only way in which it may be possible to reinforce a vital sector may be by using an airborne force.

### Strategic Employment

On the other side of the medal, it is obvious that massive airborne operations in the tactical role are themselves likely to be very vulnerable to enemy atomic attack, both in the mounting phase and, perhaps more particularly, immediately after dropping, such as when concentrated, and before they can either gain protection by dispersion or by digging in on their objectives.

If this vulnerability is taken into account together with the timelag in mounting large-scale operations, one is led to the conclusion that the size of airborne forces used in the tactical role will have to be limited, possibly to brigade or battalion group operations. If used in conjunction with atomic weapons, however, such forces may still be able to exert a decisive influence on the battle.

Another major war will inevitably be a global war from the outset, and the initial stages may see a scramble for strategic positions on a global basis. Airborne forces are well suited for seizing these strategic "plums" because their strategic mobility greatly exceeds that of any comparable land, seaborne, or air-transported force.

An airborne force requires no secure entry airfields, no reception committee or advance arrangements, can land against a degree of local opposition, and has considerable latitude as to where it lands both in relation to its objectives and possible opposition. Speed and surprise are likely to be the decisive factors in operations of this type, and the air confers just these advantages on airborne forces.

It is unlikely that worthwhile strategic targets will be easily or directly accessible overland or, to a lesser degree, by sea. None can, however, be regarded as inaccessible from the air, and it is here that airborne forces may have a great contribution to make. Such operations may be executed in conjunction with strategic air action, or in cooperation with air-transported, seaborne, or overland operations. It might well be possible, in the initial stages of a war when enemy air and ground defenses may not have completed their deployment, to use large airborne forces for the seizure of such vital strategic targets. The possibility of timely and effective enemy interference with such operations will depend very largely on the speed with which such operations are undertaken, and on good security and deception arrangements. It appears probable, therefore, that the scope for future employment of large-scale airborne forces may be mainly in strategic operations.

### Local Wars

There is obvious scope for the employment of airborne forces in local wars, on the pattern of Korea, Indochina, or in police operations in such places as Malaya and East Africa, provided the terrain is not totally unsuitable. In Malaya operations involving both parachute

and helicopter troops have been carried out in miniature and no doubt considerable operational experience has been gained. Larger scale airborne operations were carried out in Indochina, but were confined almost entirely to the reinforcing role, and it is unlikely that we have much to learn from such operations.

It is, however, a matter of simple mathematical calculation to work out that an airborne force suitably located, and with the requisite airlift available at short notice, would dispense with the necessity of deploying large numbers of troops in areas of potential unrest. Local garrisons could be reduced and very considerable manpower and financial economies achieved in this way. Once more the superiority of airborne forces over air-transported forces in such employment is worth stressing.

It is possible that in the next few years we may see the helicopter or convertiplane developed to a stage when it can be considered as an alternative to the parachute as a method of committing troops to battle from the air. It is also possible that extravagant claims will be made for its all-around superiority over the parachute in this form of employment.

Its more obvious advantages are that no specialized troops, training, or equipment will be necessary, and that it will not be unduly susceptible to bad weather, thereby making it possible to guarantee airborne operations in the future. Mounting an airborne operation will be a little more complicated process than embussing the assault troops in motor transport, thus cutting down the timelag which is so restrictive at present.

It is equally apparent that its lack of range, which cannot be materially increased without a disproportionate and unacceptable loss of payload, will preclude any possibility of its use in the strategic role. It also appears likely that its vulnerability while depositing its loads may make it essential for large-scale helicopter landing zones to be secured in advance by parachute troops.

A reasonable interim conclusion may, therefore, be that while the helicopter has obvious tactical possibilities, it is unlikely to be suitable for strategic use, and that it is possible that the helicopter and the parachute may prove to be complementary in the sphere of airborne assault operations.

### Conclusions

There is likely to be very considerable scope for the employment of airborne forces in both an atomic war and also in local wars and police operations.

In an atomic war the greater scope will be in strategic employment and the use of large-scale airborne forces may be practicable. Tactical employment in an atomic war is likely to be limited in scale to brigade or battalion group operations. In conjunction with atomic attack, or with direct atomic support, such forces may well exert an influence out of proportion to their numerical strength and this will extend the scope of their employment beyond what has been possible in the past.

Airborne forces, held in strategic reserve or in the "fire brigade" role, make it possible to achieve large-scale economies in local overseas garrisons.

The helicopter and the parachute may eventually prove to be complementary.

The time now required to mount an airborne operation must be reduced, and this can only be done by joint army-air force simplification of procedure and of all specialized airborne equipment.

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**If we are attacked, we must win the air battle to win the war. Unless our air units were ready, we could not hope to win the air battle.**

*General Nathan F. Twining*

# The Battle for the Lebus and Göritz Bridgeheads on the Oder

Translated and digested by the MILITARY REVIEW from an article by Hans-Joachim von Hopffgarten in "Wehrkunde" (Germany) November 1955.

EVERY operation is made up of a series of individual tactical actions and it is not always necessary that all the individual combat actions on the tactical level be successful. Nevertheless, in certain combat actions there exists a close connection with the over-all operation. Often they are indispensable prerequisites for subsequent actions. The fighting unit, from the division down, is not always aware of this dependency between operation and individual action. It is, therefore, an important duty of the troop command to keep its units posted on the relationship and significance of individual combat actions to the over-all operation. Only when the unit has obtained a complete knowledge of the plan and desire of the superior command will it be able to accomplish the results asked of it.

An excellent example of the dependency of an operation on certain individual tactical actions is the defensive battle of an armored division for the Oder bridgeheads between Frankfurt and Küstrin against the Sixty-ninth and the Eighth Guard Armies of the First White Russian Front. The unit engaged here was aware from the beginning of the importance of causing all possible delay in the offensive against Berlin. Likewise, on the enemy's side, the role of the Oder bridgeheads as a decisive prerequisite to the resumption of the final offensive operation leading to the rapid conquest of Berlin had been recognized. This knowledge of the over-all situation by the forces on both sides was the cause of a bitter struggle from the beginning of February to the end of March 1945.

After the breakthrough at Magnuszew, Marshal Zhukov's First White Russian Front had begun an offensive with a broad front in the direction of the Oder between Fürstenberg and a point north of Küstrin. Marshal Zhukov's intention in this maneuver was to reach the Oder with his armies ahead of the defeated German units which were in disordered retreat, to establish several large bridgeheads, and then, from these, begin the decisive battle for Berlin. It was necessary, therefore, to establish rapidly bridgeheads between Frankfurt and a point northwest of Küstrin. Since, in the Soviet opinion, the seizure and consolidation of the necessary bridgeheads would probably require some time, the most powerful armies of the First White Russian Front—the First and Second Guard Armored Armies—could temporarily be used elsewhere. This gave the task of the establishment of the bridgeheads on the Oder to Zhukov's four remaining armies.

In pursuance of this plan the following armies of the First White Russian Front reached the Oder during the first days of February: the Thirty-third Army, located just north of Fürstenberg; the Sixty-ninth Army, between Frankfurt and Lebus; the Eighth Guard Army at Göritz (south of Küstrin); and the Fifth Assault Army at Küstrin and Schaumburg.

These four armies were disposed in a narrow and deeply echeloned manner with their attack frontage equal to that of a division in each case.

During the final week of January the *Grossdeutschland* Replacement Brigade, as a result of the catastrophe on the Weichsel, was hurriedly organized as the Kurmark Armored Division under the command of General Langkeit and, at the end of the month, dispatched by way of Frankfurt to the east.

By 22 January the main body of the

future Kurmark Reconnaissance Battalion, consisting of 1 armored car company, 1 motorized rifle company, and a few 8-wheel armored car reconnaissance detachments, as well as 75-mm self-propelled mounts, had been started eastward by rail to establish contact with the Poznan fortress. According to the orders of the Weichsel Army Group, the main body of the division was to start out on 27 January in a motorized march by way of Frankfurt and Zielenzig. It was to reach the Tirschtiegel position and then by means of delaying action east of there to make possible the occupation of this position by hurriedly scraped-together infantry forces.

The armored reconnaissance battalion never reached the Poznan fortress for it had been encircled by the enemy in the meantime. Rather, it was obliged to detrain early on the morning of 23 January at Buchenstadt, and on order of the local sector commander advance against a superior enemy and engage in armed reconnaissance action. As a result the battalion was forced farther and farther in a southwesterly direction into the Kosten-Lissa-Schlawe-Neusalz area where it quickly lost all contact with the Kurmark Division. The remnants of the battalion finally reached the division in the area north of Frankfurt, by way of Cottbus, about the middle of February after a great deal of costly fighting.

To the division, which was not yet up to normal strength in personnel and matériel, the farflung mission of the Weichsel Army Group proved to have been undertaken too late and was now impossible to fulfill. Even during the final days of January the division had encountered superior enemy forces east of Reppen which attacked with a large number of tanks and assault guns. The division was hurled back to Reppen in bitter defensive fighting and was encircled here during the first days of February. Effective combat was made difficult by a great mass of refugees who had attached themselves to the division. During the night of 2-3 February the division knocked out a large number of enemy tanks and succeeded in breaking through the encircling enemy forces and reaching Kunersdorf where it established a new defensive line which withstood all enemy attacks.

The successful delaying action of the Kurmark Armored Division created the conditions which prevented the enemy from overrunning the Frankfurt fortifications in the first attack and made it possible to establish a German bridgehead on the Oder. This held against all enemy attacks until its abandonment on 21-22 April.

On the Oder front between Frankfurt and Kietz, only a short distance southwest of Küstrin, the Germans employed the following units at the beginning of February: the Hessen People's Shock Battalion near Lebus; the Potsdam People's Shock Battalion in Klessin; the *Feldherrnhalle* Battalion in Wuhden; one alarm battalion in Podelzig on the Reitwein hills; one National Labor Service battalion west of Göritz on the west bank of the Oder; and the 3d Battalion of the SS Artillery Demonstration Regiment in the Mallnow area.

The command of these alarm units, which were by no means strong in combat strength and which were strung out in strong points over an airline distance of about 11 miles, had been entrusted to an operations staff constituted for this purpose under General Raegener, hence they will be known as the Raegener Division. They had neither communication means, reconnaissance forces, supply services, nor adequate command personnel on the division staff.

On the afternoon of 4 February elements of the Eighth Guard Army, about the strength of two regiments, crossed the frozen Oder west of Göritz in a sudden surprise attack, hurled back the Reich Labor Service Battalion which was stationed there, and seized the locality of

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Reitwein. Despite the threatening situation the Weichsel Army Group only ordered the Kurmark Armored Division to send its chief of staff to the Raegener Division at Podelzig. On the other hand the main body of the armored division which, on the evening of 3 February—with the exception of its armored infantry battalion, its tank destroyer battalion, and its artillery—had been removed from the bridgehead, remained at the Frankfurt fortress under the command of the V SS Mountain Corps.

The inevitable happened. The Soviet Command had immediately recognized the weak spot west of Göritz as well as the importance to the bridgehead of the Reitwein hills. Late in the afternoon the enemy appeared with strong reserves which he had hastily assembled, and hurled the alarm battalion's security forces back in the direction of Podelzig. Only at the urgent request of the staff of the Raegener Division made over the civil communications network did the V SS Mountain Corps decide to release the only combatworthy reserves available between Frankfurt and Küstrin—the 1st Battalion of the Kurmark Motorized Infantry Regiment and the 2d Battalion of the Kurmark Armored Regiment—and place them under the command of the Raegener Division for a counterattack against the Göritz crossing.

At the same time the *Feldherrnhalle* Battalion was to attack from Wuhden and the alarm battalion from Podelzig in order to throw the enemy back from the northern spurs of the Reitwein hills to the Oder. The armored infantry battalion, because of the time required for its march from Frankfurt, was unable to reach the low terrain along the river and launch an attack on the crossing until after nightfall. The attack of the two other battalions against the Reitwein hills during the evening hours resulted in failure because the enemy had reinforced himself and organized for defense and also neither of these battalions was capable of fulfilling this mission. Because of the complete lack of any type of radio or telephone communications, coordination and the rapid transmission of orders were impossible.

Shortly before midnight the armored infantry battalion, avoiding all contact with the enemy, had approached to within about 440 yards of the strongly occupied crossing. The surprise attack which followed was executed under heavy enemy defensive fire. The enemy, in battalion strength, immediately pushed past the armored infantry battalion and into its rear flanks in the direction of Klessin. The attack of the Kurmark *Panther* Battalion from the Podelzig-Hathenow highway against the locality of Reitwein was likewise conducted in the dark. The battalion was able to make continued resistance by the disordered fragments of the Reich Labor Service Battalion at Reitwein Farm possible.

Northeast of Podelzig the alarm battalion, reinforced by a *Panther* company, succeeded during the night in preventing the seizure of this important place. Finally after disengaging itself from the enemy, the armored infantry battalion shortly before daybreak succeeded in annihilating those who had penetrated into Klessin.

During the day parts of the Eighth Guard Army by means of a surprise attack against the Oder front—which was not yet ready for defense—had established its first bridgehead at Göritz. The Soviets, who quickly took advantage of the favorable situation, succeeded without any particularly great effort in gaining a foothold on the Reitwein hills. They thereby gained possession of the most important starting point for the development of an operational bridgehead. The reasons for the successful crossing of the Eighth Guard Army appear to be:

The Weichsel (Himmler) Army Group was completely helpless in the face of the

threatening development of the situation east of the Oder.

Decisive delaying action in the Oder-Warthe bend until a defensive front could be formed on the Oder could only be effected successfully east of Frankfurt by the Kurmark Armored Division. This division was only at half strength and combat-worthy reconnaissance forces as well as the required forces for a successful delaying action were completely lacking.

of command influence in the action of the alarm units was impossible.

For these same reasons, the Soviets were able to repulse the counterattacks of the weak forces and establish themselves during the evening hours for a lasting defense.

The Göritz bridgehead, with the commanding Reitwein hills, for many weeks became the focal point of bitter fighting which was extremely costly to both sides.

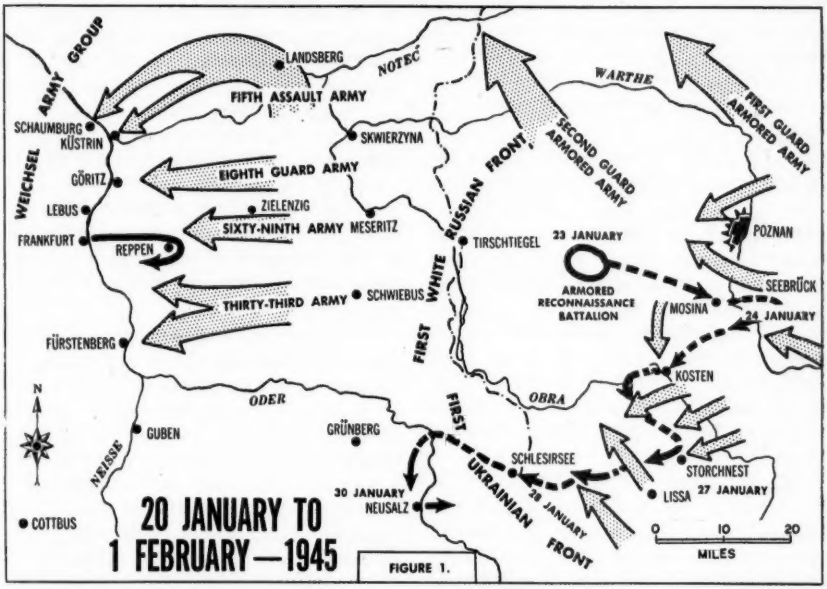


FIGURE 1.

On the decisive day, 4 February, only a part of the available units of the Kurmark Armored Division—and these only bit by bit—were thrown into the battle for the Göritz bridgehead by the commands involved.

The alarm units of the Raegener Division were by no means capable of meeting an enemy attack of this magnitude nor of counterattacking. In addition, as a result of the total lack of all radio or telephone communications—with the exception of the civil communications network—all chance

In the middle of April there emerged from this bridgehead Marshal Zhukov's First White Russian Front with a strength of 50 divisions, 22,000 guns, 4,500 tanks, and 5,000 planes.

### Widening the Bridgehead

The commanding Reitwein hills on the west side of the Oder extend from Frankfurt to Lebus and then on to Reitwein gradually rising in a northerly direction. On their decisive northern tip are three villages which, in addition to Lebus, oc-

cupy a key position for the defense of that portion of the hills occupied by Klessin, Wuhden, and Podelzig. In a certain sense, Podelzig constitutes the backbone for the defense of Klessin and Wuhden and is the key point for any major attack in the Oder depression directed westward north of Reitwein. For the Soviets the possession of Lebus was also decisive. From it, by means of an attack in a northwesterly direction on Mallnow, the defense of the triangle, Klessin-Wuhden-Podelzig, could be crushed as well as that of the curving line of hills between Mallnow and Seelow. Hence during the month of March it was organized as the Hardenberg Position.

Therefore, the objective of all the individual tactical actions of the enemy had to be:

The seizure of the Reitwein hills including Podelzig. This could only be achieved by ceaseless attacks by the Eighth Guard Army from the northern edge of the hills, southward, with simultaneous pressure by the Sixty-ninth Army from Lebus in the direction of Mallnow. This led to the establishment of the Lebus bridgehead by the First White Russian Front.

With the seizure of the Reitwein hills, the assembly area for the first phase of the great attack had also to be enlarged by means of a limited attack northward from the hills in the Oder depression as far as the Seelow-Küstrin highway. The objective of this first phase was to be the seizure of the Hardenberg Position by means of an attack from the expanded bridgehead with superior infantry and artillery forces.

In the second phase provisions were made for the breakthrough of the First and Second Guard Armies on both sides of the Seelow-Fürstenwalde highway.

The third and final phase prescribed the turning of the armored army of the First Ukrainian and First White Russian Fronts into the rear of the Ninth Army for a decisive battle of annihilation.

The "handwriting on the wall" was hovering over the Kurmark Armored Division as well as the Ninth Army. There remained only the hope that by the defense of the Reitwein hills at all costs the Soviet offensive might be delayed long enough for the Western Allies to reach Berlin ahead of the Soviet Army.

Soviet developments actually followed to the letter those to be expected and which have been briefly indicated here. However, as a result of the months of fighting for possession of the Reitwein hills, a greater delay than had been anticipated by the Soviets occurred in the establishment of the bridgehead. When, toward the end of the first week of April, the obstacle of the Reitwein hills was finally erased, not only were the operations of the Thirty-third and Sixty-ninth Armies resumed, but the over-all operation was also continued.

The piecemeal engagement ordered by the V SS Mountain Corps in the area extending from Frankfurt to the area south of Kietz was successful only in the case of the Kunersdorf bridgehead. Probably because of this erroneous decision, after a few days this command was replaced by the energetic leadership of the XI SS Armored Army Corps. With the change in command and the now noticeable influence of the Ninth Army High Command, the urgent requests of the Kurmark Division to employ the unit intact in the Raegener sector were finally granted. On 7 February it took over the Burgwall-Kietz sector, as well as all of the alarm units and the 3d Battalion of the SS Artillery Demonstration Regiment of the Raegener Division. From this point the total width of the division's defensive sector was about 18.5 miles. Not until March was the corps able to reduce this division frontage when the 712th Infantry Division at Lebus and the 25th Ar-

mored Infantry Division at Alt-Tucheband were extended and the 169th and 303d Infantry Divisions were inserted in the line. Those portions of the division which were still engaged in defensive fighting in the Kimersdorf bridgehead returned to the division after 7 February. Because of the lack of infantry the Dresden, Potsdam, and Wetzlar Cadet College Regiments as well as two construction battalions were brought up and placed under the command of the Kurmark Armored Division during the period 7-17 February. The artillery regiment, which was of decisive importance in the defensive battle, likewise had forces continually placed under its command in order to meet the enemy's bridgeheads. In addition an observation battalion was attached because of the large amount of artillery. At the beginning of the defensive battle the division had at its disposal a total of 250 guns. The attachment of a 12-cm mortar battalion with 36 weapons also represented a considerable reinforcement. The numerous heavy field-howitzer battalions were very valuable and their ceaseless concentrated bursts of fire were especially feared according to the statements of prisoners.

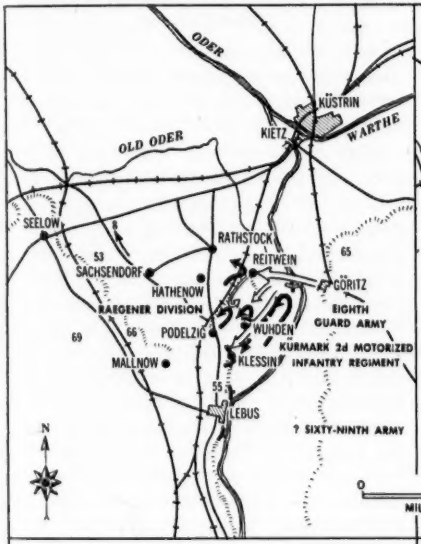


FIGURE 2.

FIGURE 3.

The Sixty-ninth Army had from 2 to 3 rifle divisions and 1 armored brigade at Lebus and the Eighth Guard Army had: 4 rifle divisions and part of an assault gun brigade at Klessin; 1 rifle division at Wuhden; 1 "8 November" Proletariat Division and 1 "1 May" Proletariat Divi-

sion as elite units on the Reitwein hills; 2 rifle divisions and 1 Guard armored division extending from north of the Reitwein hills to the Küstrin-Seelow highway. In addition to these units the army had the XI Armored Corps ready as a reserve east of the Oder.

Altogether the Kurmark Division was fighting a total of nine known rifle divisions and several armored brigades of the Sixty-ninth and Eighth Guard Armies. According to prisoner reports every enemy division basically had only 1 infantry regiment in the frontline, 1 infantry regiment as reserve close behind it, and 1 infantry regiment farther back as relief for the engaged forces. While all the rifle regiments employed in the frontline were usually relieved after 3 days of fighting as a result of heavy losses, the mortar units of the three rifle regiments remained continuously engaged.

The artillery assembly of both armies had been in the Tirpitz area which extended from east of Lebus to north of Göritz. The number of guns spotted by our observation battalions and air reconnaissance was over 1,000. Actually the number was far greater.

During the months of February and March the number of men lost per day by the Kurmark Division averaged 250 to 300 dead, missing, or wounded. On the other hand according to prisoner reports the enemy's losses must have been several times greater.

Despite replacements numbering from 3,000 to 4,000 men per month, the combat strength of the division dropped continually lower so that it had to be completely reorganized after its relief at the beginning of April. Only by a gradual reduction of the division's frontage could this drop in strength be compensated.

Beginning with 16 February the First White Russian Front, despite the heavy losses inflicted on it by the division, was able to construct five bridges across the Oder. Against these bridges the Germans used assault guns, heavy and superheavy artillery, aviation, swimmers, floating mines, and burning oil. The traffic passing over them was not interrupted to any decisive extent as the Soviet engineers were able quickly to repair all damage to the bridges during the night.

### The Fighting

An infantry battalion of one of the cadet college regiments which had just arrived from Germany was employed in a night attack against the Reitwein hills.

With great bravery these forces, supported by the 2d *Panther* Company, broke into the strongly organized enemy positions northwest of Podelzig and then with amazing spirit pushed on to the highest point. Here the battalion as it was regrouping in a wooded area was met by a massed enemy counterattack. The ideological fanaticism of an elite proletariat division and the best traditional German military spirit were displayed by the units engaged in the bitter fighting which lasted for hours. The losses on both sides were heavy. The remnants of the cadet college battalion were finally thrown back to their starting point by the far superior adversary. The battalion lost 350 men.

From this time on the enemy feared every one of our counterattacks and always met them with superior forces. The triangle, Klessin-Wuhden-Podelzig, became the scene of countless night attacks by the enemy, counterthrusts by our own forces, and it saw the employment of an unusual quantity of matériel for Eastern Front conditions.

On the average the enemy conducted 3 or 4 attacks nightly per battalion sector ranging from battalion to regimental strength. These continual attacks on the Reitwein hills only resulted in heavy losses with little gain in terrain for the Soviets. Late in the afternoon of 15 February the Sixty-ninth Guard Army made a surprise

crossing of the Oder—which had just frozen over again—in order to relieve the pressure on the Eighth Guard Army.

With two rifle divisions supported by tanks, the enemy, favored by the atmospheric conditions, succeeded in penetrating into Lebus. During the course of the bitter fighting in this village he succeeded, during the early hours of the night of 15-16 February, in splitting the greatly extended front of the Dresden Cadet College Regiment. About midnight the enemy with strong detachments then broke into the west part of Lebus as far as the Küstrin-Frankfurt railway line, and in a few places even crossed the line. As a result there now existed a gap 1.5 miles wide in the defensive line.

Except for the 2d Battalion of the Kurmark Armored Infantry Regiment, which was to relieve its sister battalion in Klessin around midnight, and the Kurmark *Panther* Battalion, the division now had no reserves at its disposal. The local reserves in Lebus had been wiped out in the house-to-house fighting which took place during the night. The reserves of the remaining regiments which in some cases were reinforced by a tank-destroyer company were immobilized by simultaneous night attacks by the Eighth Guard Army. In addition the *Panther* Battalion could not be pulled out of the north sector. This sector, weakly manned as it was, probably would not have held its own against another enemy attack.

Shortly after midnight the armored infantry battalion was able to launch a counterattack along the railway line against the enemy who had crossed it on the west edge of Lebus. By dawn, with heavy losses, the battalion had succeeded in wiping out these advanced enemy forces in hand-to-hand fighting. In this action a number of Soviet tanks were knocked out with *Panzerfauste*.

Despite this partial success, the division front was extremely attenuated that day. Thus the gap between Lebus and Klessin was occupied and finally held by only one *Tiger* and two motorized infantry groups. The Dresden Cadet College Regiment had suffered considerable losses on 15 February in the battle at Lebus against a superior enemy and had to be completely reorganized in its positions on the railway line.

Since the enemy also continued his attacks on the following day at Lebus and on the Reitwein hills, the division command looked forward with great concern to the developments that might occur in the next few days. It was due only to indecision on the part of the First White Russian Front that the entire defensive line on the Reitwein hills was not overrun by an attack from Lebus. The Soviets let this great opportunity slip through their fingers. However, the schematic action of the First White Russian Front was completely in agreement with the offensive principles of the Soviet doctrine of command. In addition, it is probable that the division line between the Sixty-ninth and the Eighth Guard Armies stood completely in the way of any major unified action by the two armies. This boundary line ran from Frauendorf to a point just south of Klessin and on to the west.

Not until 18 and 22 February was the division able to unleash any major counterattacks. The objective of these attacks could only initially be aimed at splitting the enemy's Lebus bridgehead without, at the same time, losing ground on the Reitwein hills. In spite of small operational gains, both attacks were halted by the enemy's massed artillery and antitank gunfire. After this the battle for Lebus continued unabated although the Sixty-ninth Army never achieved any decisive success.

Early in the forenoon on 1 March the Eighth Guard Army attacked in division strength after a half hour's artillery preparation in the Oder depression north of

the Reitwein hills. Making use of a Guard armored brigade, the enemy succeeded in his first thrust in effecting a deep penetration which extended to the Hathenow-Rathstock highway. The Potsdam Cadet College Regiment, which was employed in the frontline, suffered heavy losses in the beginning from the massed fire of the enemy's preparation since the prevailing high level of the ground-water here prevented the positions from being dug into the ground. South of Hathenow the enemy breakthrough proceeded much more slowly since this sector had already been heavily mined by the Kurmark Engineer Battalion.

The division reserve, composed of the *Panther* Battalion and two armored companies of the antitank battalion, arrived east of Sachsendorf just in time to meet the initial onslaught of *KW 85s* and *JS* tanks of the Guard armored brigade. Fortunately our own barrage fire was able to separate the Soviet infantry from their tanks. In view of the enemy's superiority in armor, the immediately resumed attack of the armored division reserve west of Rathstock was halted. During the same period the Eighth Guard Army launched major attacks against Klessin and Wuhden in order to definitively reduce these strong points in the German line. After a day-long artillery bombardment the enemy succeeded in encircling Wuhden in an attack from the north. Once again, however, a German counterattack reinforced by tank destroyers succeeded in re-establishing contact with Wuhden. On the following day, after pulling out the attacking forces for other urgent employment, the enemy again surrounded the locality. Its garrison then had to be supplied by air.

During the next few days the strength of the encircled garrison fell rapidly as a result of artillery and mortar fire of great intensity and only by the use of every man was it possible to fend off the enemy's night attacks. Not until the combat strength of the garrison had dropped to 40 men did Hitler, who reserved every important decision on this front for himself, acquiesce in the earnestly pressed request by the division for an attempt at a breakout.

The fate of Klessin a couple of weeks later was similar. Here, the 2d Battalion of the Kurmark Armored Infantry Regiment had been engaged in uninterrupted hard fighting for 18 days. Enemy breakthroughs, counterattacks by our forces, and massed enemy artillery fire continued for days. On 7 March the now completely decimated battalion was finally relieved by one battalion of a cadet college regiment. During the night following the relief the 4th Rifle Division of the Eighth Guard Army succeeded in surrounding the locality which now also had to be supplied from the air.

One platoon of the *Panther* Battalion again broke through the enemy minefields at night, established radio contact, and provided essentially needed medical supplies. Only after heroic fighting and the loss of the last remaining well as the result of a direct hit by the enemy's artillery, did division headquarters finally obtain Hitler's consent to an attempted breakout by the garrison. About 80 wounded officer candidates and lieutenants succeeded in reaching their own lines as the result of a night breakout.

After the fall of Wuhden and Klessin the First White Russian Front with its Sixty-ninth Army at Lebus and its Eighth Guard Army at Podelzig redoubled its efforts to finally obtain control of the Reitwein hills as a preliminary condition for the first phase of the great offensive.

The Kurmark Armored Infantry Regiment which was undermanned was employed in Podelzig and suffered very heavy losses as a result of the enemy's continual heavy artillery and mortar fire. During the final days of March the enemy, after preparatory fire lasting several hours, succeeded in breaking into the northern

part of Podelzig and in seizing possession of almost the entire area. He immediately sealed the area off by means of a dense barrage so that neither the counterthrust nor the counterattack made by our forces succeeded in reaching it again. At first our own barrage fire prevented the enemy's exploitation of his success. Podelzig became the scene of a violent artillery duel and the situation there was not materially changed.

### Conclusion

At the beginning of April, following 2 months of violent fighting, the Kurmark Armored Division was pulled out of the line so it could be reorganized and used as an army reserve force.

On the very first day of the great Soviet offensive, however, the division was thrown into the battle again at Dogelin, in order to stop a deep enemy penetration between the 169th and the 303d Infantry Divisions. In bitter fighting against units of "Free Germany" and the Soviet Army, the division was able to prevent a rolling up of the Hardenberg Position to the south. After additional costly engagements during the great offensive on 26-27 April the division at Halbe at the head of the encircled Ninth Army moved into its last, concentrated attack and broke through the encircling enemy ring.

The employment of an armored division in stabilized defense for a long period is contrary to all command principles. Nevertheless, in 1945 the conditions on the Oder were such that no sufficiently combat-worthy infantry division was available in the zone of the Ninth Army High Command. Despite the lack of infantry of its own and being engaged on an extended sector front, the division was able to fulfill its mission against an adversary who was far superior in numbers and matériel.

In addition to the heroic fighting of its infantry, the delaying of the enemy's great offensive was made only because of the outstanding support of its artillery as well as the rapid employment of its armored reserves at the shifting focal points of the battle.

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**To fight successfully on the battlefield visualized for the future, our Army must be mobile not only on the ground but in the air. Units must possess a high degree of mechanization and improved cross-country mobility with lightly armored personnel and cargo carriers. The majority of supplies for the battle area should be delivered by aircraft of the assault cargo and convertiplane type, and tactical transport of units into and within the battle area must be accomplished by basic reliance placed upon aircraft and fast moving naval vessels.**

**To achieve the utmost results from mobility there must be flexibility of organization and of mind. Tactical units will possibly be smaller regimental combat teams or integrated battle groups, of all arms; semi-independent and self-contained; capable of operating over extended distances on a fluid battlefield with little control by higher headquarters. Because of the depth and fluidity of the battlefield a greater number of these smaller units may be required. Organizations and weapons systems should be simplified and the number of vehicles and different types of weapons should be drastically reduced. Infantry, on arrival in the battle area, as in the past, must fight on foot.**

*Lieutenant General James M. Gavin*

# BOOKS OF INTEREST TO THE MILITARY READER

**ALPS AND ELEPHANTS. By Gavin de Beer. 123 Pages. Geoffrey Bles, London, W. C. 1, England. $1.40.**

BY LT COL MITCHEL GOLDENTHAL, *CE*

The march of Hannibal's army, 38,000 foot soldiers, 8,000 horsemen, elephants and all, from Spain through France and over the Alps into Italy in 218 B. C. was one of the boldest strategic strokes of all time. Unlike Xenophon or Julius Caesar, with whose campaigns his can be compared, Hannibal left no account of his great march across the Alps.

Sir Gavin de Beer has spent 25 years in solving the puzzle of Hannibal's route. With dogged determination and a skillful appreciation of weather and terrain, he brought analytical science into the service of scholarship. The question whether the elephants were Indian or African is discussed with the help of contemporary coins; the identity of a river in Southern France is deduced from the seasonal rates of flow; the pass over the Alps is determined from the altitude of perpetual sunshine; the date of Hannibal's march is established from astronomical data; and the key to the route is uncovered by a return to the original manuscripts, since most of the classical texts had been deliberately faked to make them conform with preconceived ideas and ignorance of the early editors.

*Alps and Elephants* is a scientific, detective analysis carried out 2,000 years after the event.

**RISKS: The Key to Combat Intelligence. By Colonel Elias Carter Townsend. 82 Pages. The Military Service Publishing Co., Harrisburg, Pa. $1.00.**

BY LT COL SAMUEL G. KAIL, *Inf*

This paper-back book is a brief discussion and analysis of current combat intelligence methods, practices, and procedures. Colonel Townsend's thesis is that the commander relates everything to risks; therefore, the intelligence officer can be of greatest assistance to his commander if he relates all his efforts to a determination of risks. His solution for improving combat intelligence consists in eliminating from consideration all factors except those that he terms the Two Essentials of Enemy Information—insofar as risks are concerned—enemy locations and strengths. In the author's opinion if enemy locations and strengths are known, the commander's unknown risks are either eliminated or reduced to a minimum. Thus by simplifying the intelligence officers' efforts, better intelligence will result.

*Risks* is recommended to all officers and enlisted men, particularly those interested in the intelligence field. However, this recommendation does not imply that the reviewer agrees with all that the author has written. As one example, Colonel Townsend feels that the intelligence estimate should be eliminated. In his words, "There should be only one estimate at any echelon. That estimate should be the commander's estimate."

**REALISTIC COMBAT TRAINING. By Lieutenant Colonel Robert B. Rigg. 239 Pages. The Military Service Publishing Co., Harrisburg, Pa. $3.50 clothbound. $2.75 paperbound.**

**SQUADRON ADMINISTRATION. 476 Pages. The Military Service Publishing Co., Harrisburg, Pa. $4.00.**

**THREE YEARS WITH GRANT. As recalled by War Correspondent Sylvanus Cadwallader. Edited by Benjamin P. Thomas. 353 Pages. Alfred A. Knopf, New York. $4.75.**

BY LT COL KARY C. EMERSON, *Inf*

In the fall of 1862 an undistinguished newspaper reporter named Sylvanus Cadwallader arrived at the Headquarters of the Department of the Tennessee for what might well have been a relatively short stay. He was to fill the place of a reporter who had recently been arrested by Ulysses S. Grant for circulating "ill-informed" information. Cadwallader was to act as correspondent for the *Chicago Times* and to intercede with Grant for the release of the imprisoned reporter.

How well Cadwallader succeeded in both missions is vividly portrayed in this book, for he stayed with Grant for the remainder of the war. Grant allowed him great privileges and freedom of movement; in Cadwallader, Grant found a champion who in the latter stages of the war switched from the midwestern paper to the powerful and influential *New York Herald.*

Almost on his arrival at Grant's headquarters, Cadwallader assisted Grant in a very difficult situation, and from that time on there was a close relationship between the two, Cadwallader taking an active interest in protecting Grant from "demon rum." Cadwallader's accounts indicate he was reasonably successful.

In this volume the reader will find an interesting and bright picture of Grant the commander and of high-level military operations during the Civil War.

**MODERN GERMANY. Its History and Civilization. By Koppel S. Pinson. 637 Pages. The Macmillan Co., New York. $10.00.**

BY LT COL W. C. MAGATHAN, JR., *Arty*

"Most military officers in all zones of occupied Germany were appallingly ignorant of the German language, of German history, and the background of the Nazi movement." Dr. Pinson made this statement in the context of his discussion of the post-World War II occupation of Germany. Although this is not the place for a rebuttal—or an apologia—the fact remains that such knowledge on the part of personnel serving in Germany is of utmost importance in the difficult times ahead. A study of this book is an excellent preparation for assignment in Germany today.

Viewed in retrospect one is struck by the continuity Dr. Pinson brings to his history. Events are seen to flow logically from one era to another, and the integration of the economic, cultural, and sociological patterns of the times into the forces which culminate in successive phases of German history is successfully covered. This is a history that will stand rereading.

**SEIZURE OF THE GILBERTS AND MARSHALLS. United States Army in World War II. By Philip A. Crowl and Edmund G. Love. 414 Pages. Superintendent of Documents, Government Printing Office, Washington 25, D. C. $5.75.**

**A MILITARY HISTORY OF THE WESTERN WORLD. Volume 2. From the Defeat of the Spanish Armada, 1588, to the Battle of Waterloo, 1815. By Major General J. F. C. Fuller. 561 Pages. Funk & Wagnalls, New York. $6.00.**

**NINE SOVIET PORTRAITS. By Raymond A. Bauer. Assisted by Edward Wasiolek. 190 Pages. The Technology Press, Massachusetts Institute of Technology and John Wiley & Sons, Inc., New York. $3.95.**

**RECKLESS, PRIDE OF THE MARINES. By Andrew Geer. 224 Pages. E. P. Dutton & Co., Inc., New York. $3.50.**

BY COL DANIEL C. POLLOCK, *USMC*

This is the biography of a gallant horse and the men in her life. The story which is competently written, informative, and entertaining is true.

Part I relates how this beautiful sorrel mare came to be in the possession of a young Korean boy. It concludes with the sale of the horse with racetrack blood in her veins to a Marine Corps officer.

Part II takes up the story the day she joined the United States Marines in Korea as an ammunition carrier for a recoilless rifle platoon. She served faithfully and well and was dubbed "Reckless" after the platoon's own recoilless rifles. It recounts the deeds and didos of Reckless, in and out of the frontlines, that captured the hearts of her fellow Marines. Basically it is a heart-warming account of a brave animal among brave men. To those who served in Korea it will bring back a multitude of memories. For the military student it is a study of leadership and morale among the civilians and the fighting men who together, individually or in small groups, make up the "little picture" of war.

**CELESTIAL NAVIGATION FOR YACHTSMEN. By Mary Blewitt. 64 Pages. The Philosophical Library, Inc., New York. $2.75.**

BY CAPT WILLIAM P. WOODS, *USN*

This is a handy manual for yachtsmen and amateur sailors who wish to be burdened with a minimum of books and tables. The book is excellent and its purchase is recommended before buying a yacht. An understanding of the principle of the celestial triangle will go a long way in keeping the navigator out of trouble. Celestial navigation is based upon this principle. Also, there is no substitute for practice and proficiency in using the sextant.

**MIDWAY. The Battle That Doomed Japan. By Mitsuo Fuchido and Masatake Okumiya. 266 Pages. United States Naval Institute, Annapolis, Maryland. $4.50.**

BY CAPT RALPH J. BAUM, *USN*

This book covers the evolution of Japanese naval strategy from the early 1930s through Pearl Harbor and the Battle of Midway. It contains an accurate and detailed account of why the Midway operation was planned, how it was fought, and concludes with a concise analysis on why it ended in a defeat for the Japanese.

*Midway* is a very interesting, well-documented history of the Japanese Navy during the early days of World War II, and is written by two naval aviators who took part in the battle. It gives an enlightening account of the Japanese naval leaders of that time, placing a new perspective on their abilities, shortcomings, and their ways of thinking and acting.

It is well worth reading by those interested in leadership as well as naval strategy and tactics.

**NUCLEAR ENERGY AND ITS USES IN PEACE. By Gerald Wendt. 76 Pages. Columbia University Press, New York. $0.50.**

BY LT COL LEONARD J. PASCIAK, *SigC*

*Nuclear Energy and Its Uses in Peace* gives a general picture of the present and possible future uses of nuclear energy. After presenting a nontechnical discussion of the sources, nature, and types this pamphlet discusses nuclear power reactors, the use of radio isotopes, and the need for international cooperation to further the development of peaceful uses of nuclear energy.

The greatest portion of the text is devoted to uses of radio isotopes as tracers and for medical treatment. UNESCO's report is an interesting, readable, although rather incomplete discussion of peaceful applications of nuclear energy; the scope and manner of coverage are well suited for the average reader.

**THE CALL TO HONOUR. The War Memoirs of General de Gaulle. Volume I. By Charles de Gaulle. Translated from the French by Jonathan Griffin. 302 Pages. The Viking Press, New York. $5.00.**

BY MAJ FREDERICK A. SMITH, JR., *Inf*

*The Call to Honour* is General de Gaulle's memoirs of the early war years, 1940-42, and in a way his *apologia pro vita sua.* Readers will enjoy a deep insight both into the character of the man and the motives which prompted his actions.

De Gaulle gives an excellent account of the military collapse of France in 1940. He even retraces his prewar efforts to establish a separate armored force, the absence of which behind the Maginot Line, in his opinion, caused the defeat of the French armies. This section will be of interest to the military student, both from the standpoints of de Gaulle's evaluation of the military situation and his pen sketches of the leading French personalities of the time.

This volume will do much to change the picture of de Gaulle which was created by the American wartime press—that of a tall, arrogant, egotistical, and often difficult man who at times placed the interests of France above the defeat of the common foe. He defends his controversial actions, which made him unpopular in Allied circles, by shedding new light on Franco-British relations, which were surprisingly cool.

Volume I will be a must for the reader who desires a complete understanding of the important events that took place early during World War II.

**AN ELEMENTARY TEXTBOOK OF PSYCHOANALYSIS. By Charles Brenner, M. D. 219 Pages. International Universities Press, New York. $4.00.**

**ROCKET PROPULSION. Second Edition. By Eric Burgess. 235 Pages. The Macmillan Co., New York. $4.50.**

**ADMINISTRATION IN THE BURMA CAMPAIGN. By Major B. N. Majumdar. 68 Pages. Clifton & Co., Delhi, India. $0.70.**

**JEFFERSON DAVIS: AMERICAN PATRIOT 1808-1861. By Hudson Strode. 460 Pages. Harcourt, Brace & Co., New York. $6.75.**

BY LT COL C. A. CHRISTIN, *Arty*

This volume, the first of a 2-volume work, covers Jefferson Davis' early boyhood, his years as a cadet at West Point, as a lieutenant on the frontier, as regimental commander and hero in the Mexican War, as Representative, Senator, and Secretary of War, and ends with his election as President of the Confederate States in 1861.

The author combines historical fact with an intimate insight into Jefferson Davis' character, through excerpts from letters to friends and loved ones, to portray him as a warmhearted and noble man who possessed personal and political courage in abundance, foresight, impeccable integrity, and who, prior to the Civil War at least, was held in high regard in the North as well as the South.

Aside from the authentic and well-documented picture of Jefferson Davis, the man, this biography provides an excellent and colorful history of the period, and of the South's views toward the crisis which resulted in the War between the States. The personalities who played such an important part in this period of dissension become real and alive under Mr. Strode's careful handling.

**THE DEATH OF HITLER'S GERMANY. By Georges Blond. Translated by Frances Frenaye. 302 Pages. The Macmillan Co., New York. $4.50.**

**MEDICAL SUPPORT OF THE ARMY AIR FORCES IN WORLD WAR II. By Mae Mills Link and Hubert A. Coleman. 1,027 Pages. Office of The Surgeon General, United States Air Force, Washington, D. C. $7.00.**

**THE COLOSSUS AGAIN: Western Germany From Defeat to Rearmament. By Alfred Grosser. 249 Pages. Frederick A. Praeger, New York. $4.75.**

BY LT COL IRVING HEYMONT, *Inf*

The Colossus is Western Germany. In a concise survey Mr. Grosser, one of the foremost French experts on German affairs, traces the revival of Western Germany from abject defeat in 1945 to a prosperous sovereign state in 1955.

This sober and unemotional account of the transformation of a defeated dictatorship to a prospective bastion of the free world carefully studies the German leaders, people, and political affairs. An objective appraisal is made of the factors that motivated this revival. Mr. Grosser presents interesting data about German attitudes on their role in the cold war, the denazification program, and the war guilt question.

The author believes that initially, despite errors made by all the occupation authorities, Western Germany was started on the path of progress toward a truly democratic and liberal motion. However, the necessity for rearming in face of the Communist threat has given new impetus to the forces of reaction. "Militarist anti-communism," according to Mr. Grosser, "encourages German nationalism and irredentism." He is not certain that external attack is the greatest danger facing the European countries outside the Soviet sphere. He sees a possible greater danger in economic and financial difficulties resulting from priority being given to rearmament rather than to economic and social reform required to make Europe attractive to the young of all nations.

Although one may disagree with Mr. Grosser's conclusions, his book affords a valuable insight into the crosscurrents and trends now at work within Western Germany. *The Colossus Again* should be of interest to all military personnel concerned about this focal area of Europe.

**SEA FIGHTS AND SHIPWRECKS. True Tales of the Seven Seas. By Hanson W. Baldwin. 315 Pages. Hanover House, New York. $3.95.**

BY MAJ JOHN J. EARLEY, *Inf*

Eighteen drama packed, factual stories are told in this book. They are tales of disasters, typhoons, one derelict, one mutiny, and several sea battles, including the controversial "Bull's Run" in the Battle of Leyte Gulf. The age span is from 1816 to 1945 with one common denominator, the sea.

The stories should be of special interest to the military man, and will make pleasant reading for any member of the family.

**WORLDWIDE COMMUNIST PROPAGANDA ACTIVITIES. Edited by F. Bowen Evans. 222 Pages. The Macmillan Co., New York. $3.00.**

BY LT COL WILLIS B. SCUDDER, *Arty*

From the swell of Communist propaganda that is beamed to almost every corner of the globe, it is difficult for the average person to realize the full extent of this most cherished Communist weapon. Mr. Evans has attempted to place this weapon in its proper perspective. Using reports from many sources, the book describes the worldwide organizational network through which Communist propaganda is disseminated.

Facts and figures are available here on all means of overt propaganda activities; newspapers, films, and cultural organizations all receive attention in this book. Here, too, the reader will find a description of Communist strength, goals, and propaganda activities in each geographic area of the world.

Not a book for an evening by the fire, it is, however, a valuable reference work.

**MACHINE GUNS AND GUNNERY FOR MACHINE GUNS. 218 Pages. The Military Service Publishing Co., Harrisburg, Pa. $2.00.**

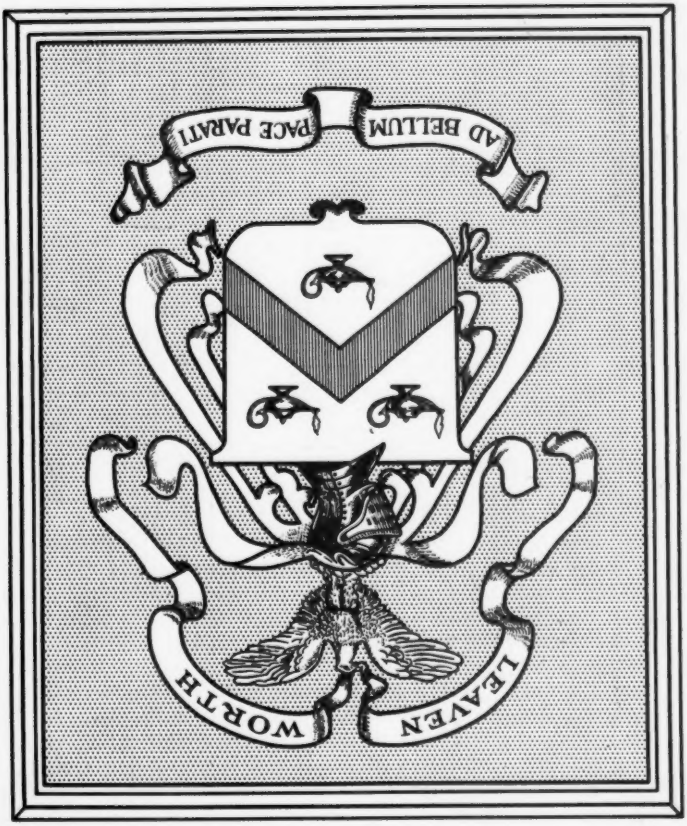
## MILITARY REVIEW ANNUAL AWARD

The 12 best articles submitted by military writers and published in the MILITARY REVIEW during the period November 1954 through October 1955 inclusive have been reviewed by the Faculty Board of the Command and General Staff College. The following article was selected to receive the Annual Award of $350:—

MILITARY FORCES AND NATIONAL OBJECTIVES,
*Major Charles M. Fergusson, Jr.*

The monthly award winners that were considered in the Annual Award competition were:

| *Month* | *Title and Author* |
|---|---|
| Nov | The Changing Nature of War, *Col Frank J. Sackton* |
| Dec | Cuban Crisis, *Lt Col Stockbridge H. Barker* |
| Jan | Harness the Revolution, *Maj John H. Cushman* |
| Feb | Notes on Defense, *Maj Melbourne C. Chandler* |
| Mar | Mass Man and the Military Officer, *Lt Col Anthony L. Wermuth* |
| Apr | A Fighting Heart for the Army's New Look, *Col Richard W. Whitney* |
| May | The Principles of War and the Solution of Military Problems, *Lt Col Marshall L. Fallwell* |
| Jun | A "New Look" for Army Logistics, *Lt Col Prentiss B. Reed, Jr.* |
| Jul | Tactical Air Support for Army Forces, *Col Jules E. Gonseth, Jr.* |
| Aug | Probability and Atomic Support, *Lt Col Malcolm M. Jameson* |
| Sep | Logistics of the Future, *Col Thomas F. Donahue* |
| Oct | Military Forces and National Objectives, *Major Charles M. Fergusson, Jr.* |

**The MILITARY REVIEW and the Command and General Staff College assume no responsibility for the factual accuracy of the information contained in the MILITARY NOTES AROUND THE WORLD and the FOREIGN MILITARY DIGESTS sections of this publication. The items are printed for the purpose of stimulating discussion and interest, and no official endorsement of the views, opinions, or factual statements is to be implied.—The Editor.**

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